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TITLE: Novel Recruitment Techniques for a Study of Culture-Specific Diet, Metabolic Variability and Breast Cancer

Risk in African-American Women

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There are few studies examining breast cancer risk in African Americans and fewer still in the rural south. African-American women are more frequently diagnosed with aggressive breast cancer than Caucasian women. Socioeconomic factors do not completely explain the ethnic differences in breast cancer mortality. The purpose of this pilot study was to develop a novel method of recruitment, focused primarily on minority women, and investigate previously unexplored risk factors for breast cancer. To date, interviews have been completed for 680 women, aged 29-75, 390 with breast cancer and 290 community controls. The participation rate for cases is 73% for Caucasian women, and 64% for African-American women. These rates are much improved over those using the standard methodology employed in an earlier study (37% and 30% for cases and controls, respectively). A food frequency questionnaire supplemented with foods commonly eaten by women in the rural south was developed and administered to the consenting breast cancer cases and controls. Entry of the questionnaire data into the computer database is complete and data cleaning and the transformation of the variables is underway. We phenotyped the breast cancer cases and controls for sulfotransferase and observed no association between sulfotransferase activity and odds of breast cancer. We genotyped the breast cancer cases and controls for 5 sulfotransferase polymorphisms and observed no association between any of the polymorphisms and odds of breast cancer. Work to complete the phenotyping and genotyping for NAT and CYP1A2 is underway. In conclusion, we have successfully developed infrastructure for the conduct of population based studies in this under served population in Arkansas. Work is underway to explore the reasons for the disparity breast cancer outcomes in African-American women compared to Caucasians.

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Introduction and Background. Among African-American women younger than age 50, breast cancer incidence is almost twice that of Caucasian women. African-American women are more often diagnosed with aggressive tumors and have higher mortality rates than Caucasians. Differences in tumor biology and mortality do not appear to be due to factors related to socioeconomic status. Little is known regarding explanations for these racial disparities, perhaps because of the difficulty in enrolling African-Americans into research studies. The purpose of this pilot study was to develop a novel method of recruitment, focused primarily on minority women, and investigate previously unexplored risk factors in breast cancer epidemiology. Through rapid case ascertainment by tumor registries in Arkansas, we intended to enroll approximately 260 cases over two years, frequency-matched to controls randomly selected from Health Care Finance Administration (HCFA) and Arkansas Driver Services (ADS) lists. Cases and controls are matched to racially similar breast cancer survivor-recruiters. Potential participants are sent introductory postcards with the recruiters' photographs on them. Several days later, the recruiters call the potential participants to describe the study and seek their participation. Culturally appropriate interviewers administer questionnaires, draw blood and collect urine specimens from the participants. Once processed, data from these sources will be used to explore study hypotheses related to gene/environment interactions. We intend to evaluate the role that diet particular to African-Americans in the rural South may play in breast cancer etiology, and to assess the possible modification of risk by genetic differences in steroid hormone and carcinogen metabolism. A specimen bank was established to enable exploration of future hypotheses.

Breast Cancer Epidemiolgy. African-American women are more frequently diagnosed with advanced, aggressive tumors (1) and those under age 50 are at almost twice the breast cancer risk of Caucasian women (2). Breast cancer mortality rates are higher in Arkansas African-American women than in the US overall. A study of ~7000 Caucasian, African-American and Hispanic women (3) found that within each stage, African-American women had more aggressive tumors, characterized by a higher proportion of ER-negative/PgR-negative, a higher proportion with high mitotic index, and significantly worse outcome than Caucasian or Hispanic women. There is compelling recent evidence demonstrating that genes such as CYP3A4, involved in steroid metabolism, have polymorphisms that are associated with early onset of puberty in

African Americans and may in turn contribute to more aggressive breast tumors at an earlier age among African Americans. A large proportion of breast cancer risk factors are hormonal (4), suggesting that prolonged exposure to circulating estrogens influences breast cancer risk. This may be through mitotic stimulation of mammary epithelial cells, or perhaps through mutagenesis by hormone metabolites. Endogenous hormones seem to vary among ethnic groups, as evidenced by racial differences in markers of endogenous hormones such as insulin levels, glucose tolerance, insulin resistance (5-14), and bone mass (15-17). Higher serum estrone concentrations and lower androstenedione have been noted in African-American women compared to Caucasians (18), even after controlling for obesity. Consumption of dietary fat has been suggested as one explanation for higher levels of estrogens in African-American women (19). In a diet intervention study (19), reduction of fat and increase in fiber reduced levels of estradiol and estrone in African-American women, but serum hormone levels remained significantly higher than in Caucasian women on the same controlled diet. This striking difference of higher serum levels of estrone (by 37%), estradiol (by 55%), and free estradiol (by 30%) for African-Americans could be explained by differences in factors such as BMI and waist-to-hip ratio or perhaps to genetic differences in steroidogenesis and hormone metabolism. The goals of this pilot study are to explore exposures common in the south and their association with breast cancer risk. And to characterize polymorphisms of hormone metabolizing genes as markers of cancer odds.

Recruitment of African-Americans to population studies. Recruitment of African-Americans into research studies is historically difficult (20). This is true also of African Americans in the rural south. Our group has developed methods and has the infrastructure in place to recruit African Americans to epidemiological studies. Recruiters are matched to potential participants by ethnicity and area of residence. Through focus groups, we have developed training procedures that have been standardized in a manual. Methodology to successfully achieve African-American participation in research studies is of high priority, and we have developed strategies to increase participation with the help of breast cancer survivors who serve as lay advocates, health educators, and recruiters for our epidemiological studies. These methods are currently in use for the recruitment of African-American prostate cancer patients and controls and were developed in the pilot breast cancer case-control study

funded by the DOD.

The Technical Objectives and Progress.

The proposed work was a pilot case-control study of breast cancer in African-American women. We realized, however, that without a comparable Caucasian group from the same locales as the African-American women, interpretation of the data would be difficult. It would be impossible to determine if specific risk factors are more prevalent in African-American women and are, thus, related to the increased early age at onset and more aggressive disease, or if they are merely regional habits that are shared by women of both groups. Therefore, additional funding was sought from the Public Health Service Office of Women's Health (DHHS PHS OWH)/National Center for Toxicological Research to support an identical study in Caucasian women, so that results could be compared. Although that study is conducted under a separate protocol, results will be discussed herein.

Research accomplishments associated with each Task outlined in the Statement of Work will be addressed within the context of each of the accomplishments.

<u>Technical Objective 1</u> Develop and pilot a novel approach for enrolling minority women into research studies.

Task 1: Months 1-2: Organizational start up tasks--finalize questionnaire, continue training sessions and role-playing with Witness Project[™] recruiters and interviewers.

These tasks were accomplished in year 1. The questionnaire was finalized, interviewers are trained and experienced, and the recruiters are successful. Meetings are held regularly with recruiters to maintain enthusiasm and commitment, and to troubleshoot areas of difficulty. Presentations of recruitment strategies were made at two meetings (as well as the DOD meeting) in 2000: Keystone Conference in Taos entitled "Molecular Epidemiology: A New Tool in Cancer Prevention", and at the Annual Meeting of the American Association for Cancer Research.

Task 2: Months 3-24. Identify incident breast cancer cases by rapid ascertainment; Identify controls from Department of Motor Vehicles and State Identity lists; recruitment of 230 cases and 230 controls by staff from Witness Project.™ Periodically assess effectiveness of individual recruiters by evaluation of response rates among women contacted by each individual.

Recruitment of both cases and controls is ongoing. As reported last year, the study has not moved as quickly as anticipated, primarily because of the inability to identify sufficient numbers of African-American women with breast cancer who are eligible for the study. As reported in the previous annual reports, we expanded our case-ascertainment efforts to several other sites to increase numbers of African-American women who were eligible for our study. Although we had obtained IRB permission before making any of these changes to the protocol, we overlooked getting prior permission from the Department of Defense. We stopped case ascertainment and recruitment at the request of the USAMRMC until the changes were approved by the DOD Human Subjects Protection Committee.

Another significant change is that the PI of the study, Dr. Christine Ambrosone, accepted a position at the Cancer Epidemiology Program at the Derald H. Ruttenberg Cancer Center, Mount Sinai School of Medicine, New York, New York, where she began in November, 2000. The funded study remains at NCTR and UAMS, and Dr. Fred F. Kadlubar, Chair, Division of Molecular Epidemiology, NCTR, became the PI of the study. We submitted all of these changes to the USAMRMC HSRRB and UAMS IRB, which also stopped case ascertainment and recruitment until all the changes were approved by all the IRBs. These problems have delayed achievement of some study goals.

Table 1 shows numbers of women enrolled into the study to date, and response rates for both African-American and Caucasian women. To date, interviews have been completed for 680 women, aged 29-75, 390 with breast cancer and 290 community controls. The participation rate (the proportion of women who complete the study) for cases is 73% for Caucasian women, and 64% for African-American women. These rates are much improved over those using the standard methodology employed in an earlier study in this difficult-to-reach community, in which, for Caucasians and African-Americans (men and women) combined, participation rates were 37% and 30% for

cases and controls, respectively.

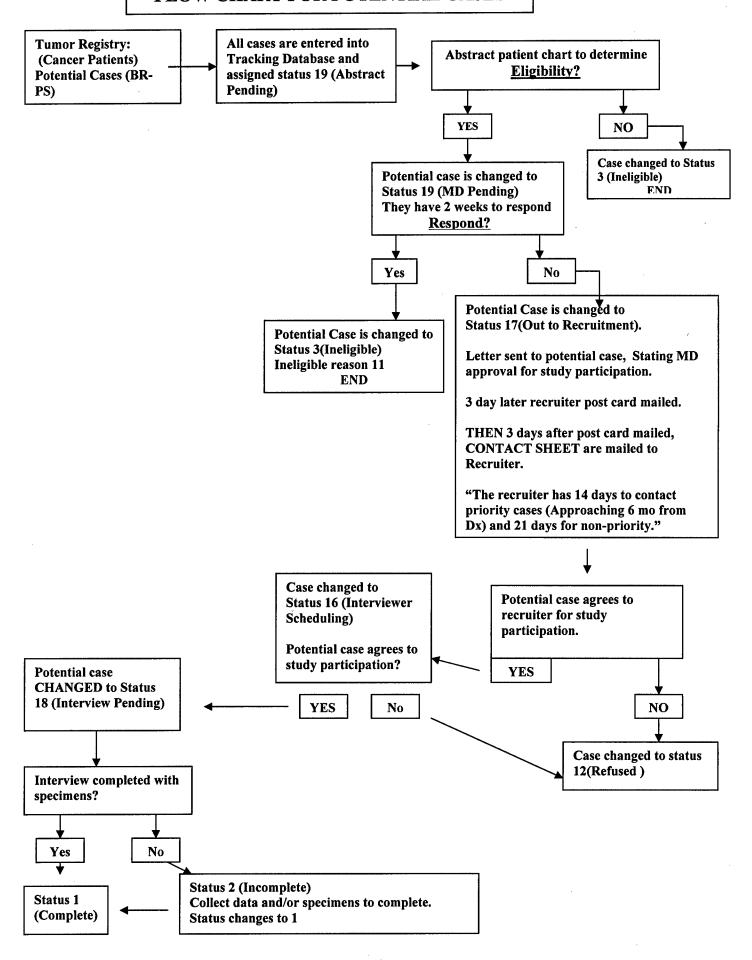
Table 1. Participation in Case-Control Study

	African-Am	erican Women					
	Total contacted	Number Enrolled	Participation Rate				
Cases	136	87	64%				
Controls 284 126 44%							
	Caucas	ian Women					
	Total contacted Number Enrolled Participation Rate						
Cases	414	303	73%				
Controls	431	164	38%				

Task 3: Months 24-30 Calculate overall response rates for cases and controls, using Witness[™] recruiters. Compare to those in UAMS earlier pilot study of breast cancer, among African-Americans in colon cancer study at UAMS, and in published epidemiologic studies in African-American populations.

As indicated in Table 1, participation rates for African-American cases and controls are 64% and 44% respectively. In the earlier study of **colon cancer** at UAMS in this difficult-to-reach community, where potential participants were contacted by an interviewer in a standard method, participation rates were approximately 37% and 30% for cases and controls, for Caucasians and African-Americans (men and women) combined. Response rates for cancer cases is much improved with our new methods (please see figures below for flow charts of recruitment for breast cancer cases and controls). However, recruitment rates of African-American cases continues to be lower than that for Caucasian cases. Use of cancer survivors to recruit controls has only modestly increased the recruitment rates (30% vs 38%).

FLOW CHART FOR POTENTIAL CASES



FLOW CHART FOR POTENTIAL CONTROLS

Match cases to controls in Acxiom (Each control is marked for each case) Marked names are considered "Used" Letter, brochure and postcard are sent to potential controls (signed by Luke) 2 weeks allowed for return of postcard. **Did Postcard Return?** Status = (Refused by postcard) NO Status = (Passive agreement) "Acxiom list marked" Passive Agreements are entered into the "Tracking DB" as Status 6 (Awaiting recruiter assignment) A portion of the Status 6's are assigned to a recruiter by workload and gender. Status 6 changed in Tracking DB to Status 17 (Out to recruiter.) Recruiter Post card mailed to potential control 3 days later (RCS) Recruiter Contact mailed Recruiter has 21 days to contact potential control Did Potential control agree to Participate? Yes No Agree: Change to Status 16 (Interviewer Scheduling) Refused: Change to Status 12 Interviewer attempts to contact / schedule appt with (Document reason) participant. Did participant agree? Yes No Change to Status 18 Refuse: Status 12 (EVD) Note as Late (Interview Pending) Refusal (Document reason)

<u>Technical Objective 2</u> With a Food Frequency Questionnaire (FFQ) supplemented with foods commonly eaten by African-American women in the rural south, investigate the role of dietary sources of fat and heterocyclic amines in BC risk.

Task 1: Months 1-3 Adapt FFQ to include foods found to be commonly eaten by African-American women in Eastern Arkansas previously surveyed.

As reported in prior annual Reports, to determine if additional foods should be added to the Gladys Block Health Habits and History Questionnaire (HHHQ) to improve its suitability for African-American women in the lower Mississippi Delta, we conducted a survey of foods and cooking methods that may be particular to these residents. In collaboration with the Department of Dietetics and Nutrition at UAMS, a list of 60 foods commonly eaten by this population, such as wild game, parts of animals not traditionally eaten, and foods cooked with fat, was compiled through in-depth interviews and focus groups. We developed a Food Frequency Questionnaire with those foods elicited and then surveyed approximately 400 African-American women, aged 40 to 70, who live in eastern Arkansas. The survey indicated that few of the foods queried were eaten frequently by a large proportion of the population, but that several food items not on the Block questionnaire were eaten 1 to 4 times or more per month by > 50% of women surveyed. These foods included okra, southern peas (crowder, purple hull, split), butter and northern beans. Furthermore, more than 50% of women added fat when they cooked beans or greens, such as collards, mustard greens or kale. These additional items were added to the questionnaire already validated in Atlanta for a southern African-American population.

Task 2: Months 3-26 Interviews with cases and controls; ongoing monitoring of interviewers.

Completed questionnaire booklets (please see appendix) were reviewed weekly by the study coordinator, for accuracy and coherence. Interviewer performance was also evaluated continually. One phenomenon that we have observed using this methodology is the case in which a potential participant will agree when speaking with the recruiter, but then refuse when contacted by the interviewer. Late refusals may occur at the time the interview is scheduled, or after the interview is scheduled, often after several requests from the participant to reschedule. Interestingly, the pattern of

late refusals varies by interviewer, and steps were taken to train all interviewers in how to approach the potential participants who have already agreed to participate.

Task 3: Months 24-30 Double data entry, with ongoing quality control.

All data collected has been double-entered and we are currently working on data checks and data cleaning.

Task 4: Months 30-36 Perform statistical data analysis; initial descriptive analyses, study of main effects of data derived from questionnaire.

Data entry is almost complete. The median age of the breast cancer cases is 54 years and median age for controls is 52 years (P<0.3). Twenty three percent of the controls were smokers and 30% of the cases were smokers (P<0.1). The median tumor size among the cases was 2cm. We are currently conducting analyses of outliers and the transformation of variables. The final endpoint analyses will be conducted shortly and manuscripts prepared for publication.

<u>Technical Objective 3</u> Evaluate genetic variability in metabolism of HAs by examining phenotypic variability in CYP1A2 and sulfotransferase activity, as well as genetic polymorphisms in *NAT1 NAT2*, *ST1A3* and *CYP1A2*.

Task 1: Months 3-26 Perform phenotyping assays for CYP1A2, NAT2, and phenol sulfotransferase.

The phenol sulfotransferase assays are complete, but the assays for CYP1A2, NAT2 still ongoing. As reported earlier, we used data for sulfotransferase, along with that from participants in a study of colorectal cancer, to evaluate correlations between data from the phenotyping and genotyping. The paper was published in Pharmacogenetics.

Task 2: Months 26-30 Perform DNA analysis for genetic polymorphisms in CYP1A2, NAT1, NAT2, ST1A3

We established a biologic specimen bank in the context of this study, and protocols for processing and storage of blood were developed. Blood samples are processed so that there are aliquots of serum, plasma, platelets, red blood cells, and buffy coat. Using a

processing system currently used in the 350,000-person EPIC study in Europe, each blood component is mechanically aliquotted into several 0.5ml straws that are prestamped with an ID number and barcode. Straws are heat-sealed and stored in canisters in liquid nitrogen tanks, with a detailed computerized mapping scheme in place. Our laboratory routinely performs high throughput genotyping and has extensive experience in assaying all of the genes proposed for study. Due to the difficulties encountered during case ascertainment the most of the genotyping analyses are still pending. Genotyping for five-promoter region and 1 coding region sulfotransferase polymorphisms was completed. There appears to be no statistically significant associations between the sulfotransferase polymorphisms and breast cancer risk. However, there was a significant correlation between the 3 promoter region sulfotransferase polymorphisms and sulfotransferase activity. A manuscript describing these findings is currently being prepared.

Task 3: Months 31-36 Merge data from laboratory results with questionnaire database. Perform statistical analysis for main effects of polymorphisms evaluated by phenotyping and genotyping. Evaluate interactive effects of laboratory data and questionnaire data.

All the laboratory data has been merged with the pertinent **anonymized** epidemiological data and the analyses of interactions between genotype/phenotype data and odds of breast cancer are underway. This work will be competed in the next few months and manuscripts generated.

Key Research Accomplishments

- Establishment of infrastructure for molecular epidemiological study (questionnaire development, protocols and equipment for blood processing and specimen banking, recruiter and interviewer hiring and training, development of data bases for participant tracking and questionnaire data, etc.), data entry.
- Enrollment of cases and controls into study response rates superior to those in earlier case-control study in the same locales.

Adaptation of FFQ to the African-American population in Arkansas.

Reportable Outcomes

Publications:

Nowell S, Ambrosone CB, MacLeod SL, Mrackova G, Williams S, Plaxco J, Ozawa S, Kadlubar FF, Lang NP. Relationship of phenol sulfotransferase (SULT1A1) genotype to sulfotransferase activity in platelet cytosol *Pharmacogenetics* 2000;10:789-797.

Moss RA, Erwin DO, Morris-Chatta R, Long S, Ambrosone CB. Challenges, limitations and strategies for increasing participation in epidemiologic studies: a novel approach to recruiting African-Americans. *Annals of Epidemiology* (submitted). A similar paper was submitted in 1999 to two journals, but was rejected due to 'low priority'. The paper has been substantially rewritten, with more complete data available now, and was submitted to *Annals of Epidemiology*.

Biologic specimen bank established with DNA, serum, plasma and red blood cells from cases and controls.

Grant funded based upon recruitment methodology and pilot data:

"Genetic factors in breast cancer: Center for interdisciplinary biobehavioral research" (Center Grant 07/01/2001–06/30/2005, Bovbjerg, PI)

"Behavior, estrogen metabolism and breast cancer risk: a molecular epidemiologic study", Ambrosone (PI)

Conclusions

In this pilot study, case ascertainment has been accomplished through collaborations with physicians at the Arkansas Cancer Research Center (ACRC) in Little Rock and the Jefferson Regional Medical Center (JRMC) in Pine Bluff, Arkansas. Interviews have been conducted and data double-entered into a database. Blood and urine samples for

genotyping and phenotyping have also been obtained. We have established a biologic specimen bank, with a detailed protocol for blood processing and storage. Many of the assays to be performed have been refined in our laboratories at the ACRC and National Center for Toxicological Research (NCTR).

Full-scale epidemiological studies require large budgets, which include personnel, supplies, equipment, etc. Furthermore, building of an infrastructure is essential, yet laborious and time-intensive. There were few epidemiological studies being conducted in Arkansas when this study was initiated, and funding received from the Department of Defense and the OWH/NCTR has been used to develop the infrastructure and get it the study into the field. We now have cooperation from several Arkasnsas physicians and expect to continue our work on breast cancer for years to come. Our methodology has been established and tested, staff training manuals have been developed and successfully piloted, and a specimen bank has been established and is in use. Data from this pilot study was used to support a successful grant application to conduct a similar study among African-American women in New York City.

Personnel Supported by Award.

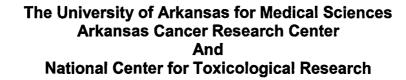
- 1. Ms. Stephanie Long Study Coordinater
- 2. Ms. Terri Ross Interviewer
- 3. Ms. Lindsey Trimble Interviewer
- 4. Mr. Christopher Wren Data Manager

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Health Habits Questionnaire



Phase	Initials	Date
Interview		
Edit		
Coded		
Consent Form		
MSHx		
HH & D Quest.	_	
Data Entry 1		
Data Entry 2		

Time interview bega	n	:		am/	pm		Intervi	ewer ID_			
Date of interview			_/ D	- D	-/ <u>-</u>	Y					
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What is the highest grade or year of school or college that you have completed?	AOO2
	 1 Eighth grade or less 2 Trade school or business school instead of high school 3 Some high school 4 High school graduate or G.E.D. 5 Trade school or business school after graduating from high school 6 Some college including 2 year degrees 7 Received bachelor's degree 8 Graduate or professional education beyond the bachelor degree 9 Graduate or professional degree 98 N/A 99 DK/R
Please look at this card and tell me which che your race? Interviewer: show respondent card A)	oice best describes AOO3
[specific]	1 African-American 2 White, not of Hispanic origin 3 Hispanic 4 Asian or Pacific Islander 5 Native American or Alaskan Native 6 Other 99 DK /R
Are you currently married, living as married widowed, divorced, separated, or never married	ı,
	1 Married 2 Living as married 3 Widowed 4 Divorced 5 Separated 6 Never married 99 DK/R

END OF DEMOGRAPHICS SECTION

SMOKING HISTORY

Now, I would like to ask you some questions about cigarette smoking.

1.	Have you ever s	smoked at least one	SH1
_	cigarette per da (CHECK AN		
	`	1 ☐ Yes 2 ☐ No →(go to Occupat	tional History section)
		99 🗌 DK/ R	<u></u>
2.	In what year dismoking cigaret	d you first start ttes?	
	(write year)		SH2
3.	How many ciga did you smoke?		SH3
4.	What kind of ci	garettes did you smoke?	
		1 ☐ Filtered 98 ☐ NA 2 ☐ Non-filtered 99 ☐ DK/R 3 ☐ Both	SH4
5.	How did you inl	hale? 1 Not at all 98 NA 2 Mouth or throat 99 DK/R 3 Chest	SH5
	······································	op smoking cigarettes	SH6
	for six consecuti	ive months or longer?	
sec	ction)	1 ☐ Yes 2 ☐ No → (go to Occ 98 ☐ NA ↑	cupational History

	99 □ DK	/R ——	
7. If yes, what year did you sto	p?	SH7	
·	(write ye	ear)	
8. Did you start smoking again section)	1 🔲 Ye	o →(Go to Occupation A ↑	SH8 onal History
9. What year did you start smo	oking next?	SH9	.
10. How many cigarettes per d did you smoke? # c	ay igarettes	98 □ NA 99 □ DK/R	SH10
11. What kind of cigarettes did	I you smoke? 1 Filtered 2 Non-filtered 3 Both	98 □ NA 99 □ DK/R	SH11
12. How did you inhale?	1 Not at all 2 Mouth or throat 3 Chest	98 NA 99 DK/R	SH12

for six consecu	1 2 2 5 98 5 99 5 99 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5	Yes No → (go to Occupational History NA DK/R	,
14. If yes, what ye	ear did you stop?	SH14	
(write year)			
15. Did you start section)	smoking again? 1	Yes No → (Go to Occupational History NA DK/R	
16. What year did	l you start smoking next?	SH16	
17. How many cig did you smoke?	garettes per day # cigarettes	98 NA SH17 99 DK/R	
18. What kind of	cigarettes did you smoke? 1	98 NA 99 DK/R SH18	
19. How did you i	nhale? 1 Not at all 2 Mouth or thr	98 NA SH19	

3 Chest	<u>:</u>
20. Did you ever stop smoking cigarette for six consecutive months or longer? section)	SH20 - 1
21. If yes, what year did you stop? ————— (write year)	SH21
22. Did you start smoking again? section)	- 1 ☐ Yes 2 ☐ No → (Go to Occupational History 98 ☐ NA 99 ☐ DK/ R
23. What year did you start smoking next? ———————————————————————————————————	SH23

cigarettes 98 NA 99 DK/R

SH24

24. How many cigarettes per day did you smoke?

25. What kind of cigarettes of	lid you smoke?		
	1 Filtered 2 Non-filtered 3 Both	98	SH25
26. How did you inhale?	1 Not at all 2 Mouth or throat 3 Chest	98	SH26
27. Did you ever stop smoking for six consecutive months or			SH27
	1 Yes 2 No - 98 NA 99 DK	A	nal History section)
28. What year did you stop s	smoking ? 	s	H28
	(write year)		
29. Did you start smoking ag	1 Yes	s →(Go to Occupati	SH29ional History
section)	98 <u> </u>		··-
30. What year did you start	smoking next?		1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1
		S	Н30
(write year)			
31. How many cigarettes per			
	# cigarettes 98 NA		SH31

32. What kin	nd of cigarettes did you smoke? 1 ☐ Fi		
	2	ltered on-Filtered oth A K /R	SH32
33. How did	ou inhale?		SH33
	2	ot at all outh or throat nest A K/R	
	ever stop smoking cigarettes utive months or longer?		SH34
	utive months or longer?	1 □ Yes 2 □ No → (go to 0 98 □ NA 99 □ DK /R ———	SH34 Description of the security section of the security section of the security section of the section of the security section of the section of the security section of the security section of the secti
for six consec	utive months or longer?	2 ☐ No → (go to 0 98 ☐ NA	Occupational History section
for six consec	r did you stop smoking ?	2 ☐ No → (go to 0 98 ☐ NA	

section)	2 No (go 98 NA 99 DK /R—	to Occupational History
37. What year did you start smok (write year)	ing next?	SH37
38. How many cigarettes per day did you smoke?	# cigarettes98 NA90 DK/R	SH38
39. What kind of cigarettes did yo	u smoke? 1 Filtered 2 Non-Filtered 3 Both 98 DK 99 R	SH39
40. How did you inhale?	1 Not at all 2 Mouth or throat 3 Chest 98 NA 99 DK/R	SH40
41. Did you ever stop smoking cig for six consecutive months or long	er? 1	Occupational History section)

42. What year did you stop smoki	ng ?	SH42
(write year)		
43. Did you start smoking again?		SH43
	1 ☐ Yes 2 ☐ No → (g section) 98 ☐ NA 99 ☐ DK /R —	o to Occupational History
44. What year did you start smoki	ing next? (write ye	ear) SH44
45. How many cigarettes per day did you smoke?		SH45
	# cigarettes 98 NA 99 DK/R	
46. What kind of cigarettes did you	1 Smoke? 1 Filtered 2 Non-Filtered 3 Both	98 NA 99 DK/R
47. How did you inhale?	1 Not at all 2 Mouth or throat 3 Chest	98 NA 99 DK/R

48. Did you ever stop smoking cigarettes	SH48
for six consecutive months or longer?	L
1 🗌 Yes	
$2 \square \text{No} \longrightarrow \text{(go to O)}$	ccupational History section)
98 🔲 NA	↑
99 🔲 DK/R	
49. What year did you stop smoking?	
·	SH49
(write year)	

END OF SMOKING SECTION

OCCUPATIONAL HISTORY

INTRODUCTION: Now I'd like to ask you some questions about the kind of work you have done. We are interested in every job, at home, or outside the home, part-time or full-time, paid or unpaid, including any self-employment, or work for companies or family businesses, which you held for a total of six continuous months or longer, since you first began working. If you held more than one job at a company, or more than one job at the same time, we would like to talk about each job separately. Also, please include any time while in the military. If you get tired during this section, we can stop and resume at another time.

Are you currently employed,	ОН1
not employed, a home maker, or retired?	
GO TO OH4 1	
A. In what year did you start being a home maker?	OH2
(write year)	
B. Did you ever have any jobs outside the home?	ОН3
GO TO Occupational Exposure Section 1 Yes 2 No 98 N/A 99 DK/R	
What was the name, city, and state of the company where you first Text worked for six months or longer?	OH4 Enter

(Job 1)	-	
	City	State
What was the job title of the Text you held for six months or lo		OH5 Ente
		(JOB TITLE)
In what year did you start w	orking in this job?	ОН6
(write year)		
In what year did you stop we In this job?	orking	ОН7
(write year) *If still	working, =97	
	KEY	
 01 = Manufacturer 02 = Retailer 03 = Wholesaler 04 = Service Provider 05 = Construction 	08 = Governn	oecify (in table)
	nis?	

(industry)	ОН9	Enter
Text		
Other (specify)		
What did this company make,		OH10
or what service did they provide?		Enter
Text		
		
What were your main activities or		OH11
duties as a (Job 1 title)? Text		Enter
	, , , , , , , , , , , , , , , , , , ,	-
(Duties)		
What kinds of chemicals or		ОН12
materials did you handle in that job? Enter Text		
(Chemical/Materials)		

OH13

Vhat kinds of tools and equipment id you use? `ext	Enter
_	
(Tools/Equipment)	
How many months per year lid you work on this job?	OH14
(months/year)	-
On average, about how many nours per week did you work on this job?	OH15
(hours/week)	-
· · · · · · · · · · · · · · · · · · ·	
While on this job, did you ever work near diesel or other types of engines or did you smell diesel or other types of exhaust?	ОН16
1 = 2 = 5] Yes] No
98 <u></u>] NA] DK/R
How did you commute to this job?	ОН17
If there was more than one commuting method, probe for primary the method that was used for the longest time or for the longest part of Bus/Tramway 5 Motorcycle	

☐ 2 Metro/Train ☐ 3 Car	□ 6 Animal □ 7 Foot		OH18 Enter
Text ☐ 4 Bicycle ☐ 98 NA ☐ 99 DK/R	□ 8 Other (specify)		<u></u>
How long did it take one way, from your	e you to get to this job, home?		ОН19
minutes		(hours)	code in
		(minutes)	
At this job, on avera			ОН20
Was your work at t indoors, mostly out same amount indoo	doors, or about the		ОН21
	98 99	Both Indoors and Oute NA	doors
What was the prima drinking water whe	ary source of n you worked there?	·	ОН22
	1	ater supply 5 Other 98 NA NA 99 DK/R	

What was the name, city and state

of the company where you NEXT			ОН2	Ente
r worked for six months or longer? (Job 2)				Text
	NAME:	<u> </u>		
	City		State	
What was the job title of the secon you held for six months or longer?			OH24	Enter Text
		(JOB TITLE))	
In what year did you start workin	g in this job?	·	ОН25	
(write year)				
In what year did you stop working	5		ОН26	
in this job?				
(write year) * If still worki	ing, =97			
	-			
	KE	Y .		

01 = Manufacturer 02 = Retailer

06 = Mining 07 = Farming/Fishing/Forestry

03 = Wholesaler 04 = Service Provider	08 = Government 09 = Other Specify (in table)		
05 = Construction	10 = Shipyard		
What type of business was this? Write answer here:		OH27	
Code(industry)			
		OH28 Ente	r
Text Other			
(specify)			
What did this company make, or what service did they provide?		OH29 Ent	
			Plant Control o
		· · · · · · · · · · · · · · · · · · ·	
What were your main activities or duties as a (Job 2 title)?		OH30 Ent	
	(Duties)		
What kinds of chemicals or			
vv nat kinus of chemicals of			E

nter

materials did you handle in that job?	ОН31 Те
xt	
	· ·
(Chemicals/Materials)	
What kinds of tools and equipmentEnter did you use? Text	ОН32
(Tools/Equipment)	
How many months per year did you work on this job?	ОН33
(months/year)	
—— On average, about how many hours per week did you work on this job?	ОН34
(hours/week)	
While on this job, did you ever work near diesel or other types of engines or did you smell diesel or other types of exhaust?	ОН35

	2	R
How did you commute to this job? If there was more than one commuting mathemath that was used for the longest 1 Bus/Tramway 2 Metro/Train	time or for the longest portion	OH36
□ 3 Car	□ 7 Foot □ 8 Other (specify)	OH37 Enter
	-1.	
Iow long did it take you to get to this jone way, from your home?	Job,	ОН38
ninutes	(hours)	code in
	(minutes)	
t this job, on average, about ow many people around you smoked?	?	ОН39
0	4	
Was your work at this job mostly indoors, mostly outdoors, or about the same amount indoors and outdoors?	1	OH40

2	98	
What was the name, city and stat of the company where you next	te	OH42 Ente
r worked for six months or longer Job 3)	? NAME:	Text
	City	State
What was the job title of the thire	d job	OH43 Ente
· vou held for six months or longer	?	Text
		B TITLE)

# IC 4:11 Line	07
(write year) * If still working,	=9/
KEY	
01 = Manufacturer	06 = Mining
02 = Retailer	07 = Farming/Fishing/Forestry
03 = Wholesaler	08 = Government
04 = Service Provider	09 = Other Specify (in table)
05 = Construction	10 = Shipyard
What type of business was this?	
Write answer here:	OH46 —
Code	
(industry)	
	OH47 Enton
Other	
Text (specify)	
(specify)	
What did this company make,	OH48 Enter
Text	
or what service did they provide?	
_	
What were your main activities or	
What were your main activities or duties as a (Job 3 title) ?	OH49 Enter

(Duties)	
What kinds of chemicals or materials did you handle in that job? Text	OH50 Enter
(Chemical/Materials)	
What kinds of tools and equipment did you use? Text	OH51 Enter
(Tools/Equipment)	
How many months per year	ОН52
did you work on this job? (months/year)	
On average, about how many hours per week did you work on this job?	ОН53

(hours/week)				
work near d	is job, did you ever liesel or other types of e mell diesel or other type			OH54
			1 ☐ Yes	s
			2	
			99 🔲 DK	
	u commute to this job?			OH55
	more than one commutin hat was used for the long			of the commute
the method th	□ 1 Bus/Tramway			of the commute.
	□ 2 Metro/Train	□ 6 Animal		OH56 Enter
Text		_ v :		OH56 Zinter
	□ 3 Car	□ 7 Foot		<u> </u>
	□ 4 Bicycle	□ 8 Other		
(specify)				□ 98 NA
	□ 99 DK/R			
How long di	d it take you to get to th	nis job,		
one way, fro	m your home?			OH57
				1 .
minutes			(hours)	code in
mmutes				
		· ·	(minutes)	
At this ich.	on average, about			01150
	eople around you smok	ed?		OH58
Alleny P	. —	. —	10.10	
	$\begin{array}{c c} 0 & \square & 0 \\ 1 & \square & 1 \end{array}$	4	10-19	
	2 1 2-4	5 <u> </u> 98	20 or more NA	
	3 7 5-9	99 📙	DK/R	

OH59

Was your work at this job mostly

indoors, mostly outdoors, or about th same amount indoors and outdoors?	ie	
Same amount indoors and outdoors.	1 Mostly Indoors 2 Mostly Outdoo 3 Both Indoors a 98 NA 99 DK/R	ors
What was the primary source of drinking water when you worked the 1		ОН60
What was the name, city and state of the company where you next worked for six months or longer? En (Job 4)	nter Text AME:	ОН61
Cit	ty	State
What was the job title of the fourth jo Text you held for six months or longer?	ob	OH62 Enter
	(JOB TITLE)	
In what year did you start working in	ı this job?	ОН63
(write year)		

In what year did you stop working In this job?	ОН	54
(write year) * If still working, =	=97	
01 = Manufacturer 02 = Retailer 03 = Wholesaler 04 = Service Provider 05 = Construction	KEY 06 = Mining 07 = Farming/Fishing/Forestry 08 = Government 09 = Other Specify (in table) 10 = Shipyard	y
What type of business was this? Write answer here:		ОН65
Code (industry) Other Text (specify)		OH66 Enter
What did this company make, or what service did they provide? Text		OH67 Enter

What were your main activities or duties as a (Job 4 title)? Text	OH68 Ente
	Outies)
What kinds of chemicals or Text materials did you handle in that job?	OH69 Ente

What kinds of tool did you use? Text	ls and equipment	OH70 Enter
	(Tools/Equipment)	
How many months did you work on the		OH71
	(months/year)	
On average, about hours per week die	how many d you work on this job?	OH72
	(hours/week)	
	did you ever r other types of engines esel or other types of exhaust?	ОН73
	1	Yes No NA DK/R
the method that was ☐ 1 Bus/Tramway ☐ 2 Metro/Train	an one commuting method, probe for primary used for the longest time or for the longest po 5 Motorcycle 6 Animal	
☐ 3 Car ☐ 4 Bicycle	☐ 7 Foot ☐ 8 Other (specify)	OH75 Enter Text

□ 98 NA

□ 99 DK/R

How long did it take you to get to this jo one way, from your home?	ь,	ОН76
minutes	(hours)	code in
	(minutes)	
At this job, on average, about how many people around you smoked?		ОН77
$ \begin{array}{cccc} 0 & \square & 0 \\ 1 & \square & 1 \\ 2 & \square & 2-4 \\ 3 & \square & 5-9 \end{array} $	4	
Was your work at this job mostly indoors, mostly outdoors, or about the same amount indoors and outdoors?	1	OH78
What was the primary source of drinking water when you worked there? 1	5 Other 98 NA 99 DK/R	ОН79
What was the name, city and state of the company where you next worked for six months or longer? Text (Job 5)		OH80 Enter
NAM	IE:	

City	State
What was the job title of the fifth job Text you held for six months or longer at (CC	OH81 Enter
you need for six months of longer at (CC	(JOB TITLE)
In what year did you start working in th	his job?OH82
(write year)	
 In what year did you stop working In this job?	OH83
(write year) * If still working, =	97
KEY 01 = Manufacturer 02 = Retailer 03 = Wholesaler 04 = Service Provider 05 = Construction	06 = Mining 07 = Farming/Fishing/Forestry 08 = Government 09 = Other Specify (in table) 10 = Shipyard
What type of business was this? Write answer here: Code(industry)	ОН84
Other(specify)	OH85 Enter Text

. •

What did this company make, or what service did they provide?	OH86 Enter Text
or what bervies and shop provides	
	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
What were your main activities or duties as a (Job 5 title)?	OH87 Enter Text
(Duties)	And an area of the second of t
What kinds of chemicals or	OH88 Enter Text
materials did you handle in that job?	
(Chemical/Materials)	
What kinds of tools and equipment did you use?	OH89 Enter Text
(Tools/Equipment)	

How many months per year did you work on this job?	ОН90
(months/year)	
On average, about how many hours per week did you work on this job?	ОН91
(hours/week)	_

.

	1 ☐ Yes 2 ☐ No	
	98 NA	
	99 🔲 DK/R	
How did you commute to this job?		ОН93
If there was more than one commuting meth the method that was used for the longest tim		f the commute
1 Bus/Tramway 5 Motorcycle	o or for the longest portion of	t the commute.
2 Metro/Train 6 Animal 3 Car 7 Foot		OH94 Enter
Text		
4 ☐ Bicycle 8 ☐ Other (specify)98 ☐ NA		
99 DK/R		
How long did it take you to get to this job one way, from your home?	,	ОН95
one way, nom your nome.		
minutes	(hours)	code in
minutes	(hours)	code in
minutes		code in
minutes	(hours)	code in
minutes		code in
minutes At this job, on average, about how many people around you smoked?		code in
At this job, on average, about how many people around you smoked?	(minutes) 4	
At this job, on average, about how many people around you smoked? 0	(minutes) 4	
At this job, on average, about how many people around you smoked?	(minutes) 4	
At this job, on average, about how many people around you smoked? 0	(minutes) 4	
At this job, on average, about how many people around you smoked? 0	(minutes) 4	ОН96
At this job, on average, about how many people around you smoked? 0	(minutes) 4	

	3	Outdoors
	99	
What was the primary source of rinking water when you worked there? 1	5	ОН98
What was the name, city and state f the company where you next ext corked for six months or longer? Job 6)		OH99 Enter
NAM	IE:	
City	ySt	ate
What was the job title of the sixth job		OH100
ou held for six months or longer at (CO Text	MPANY)?	Enter
	(JOB TITLE)	2
n what year did you start working in th	is job?	OH101
(write year)		
		OH102

In what year did you stop working	
In this job?	
(write year)	

KEY 01 = Manufacturer 02 = Retailer 03 = Wholesaler	06 = Mining 07 = Farming/Fishing/Forest 08 = Government	ry	
04 = Service Provider 05 = Construction	09 = Other Specify (in table) 10 = Shipyard		
What type of business was this? Write answer here: Code(industry)		OH103	
Other(specify) Text		OH104 E	nter
			
What did this company make, Text or what service did they provide?		OH105 E	nter
What were your main activities or Text duties as a (Job 6 title) ?		OH106 E	nter
	(Duties)		
What kinds of chemicals or Text materials did you handle in that job?		OH107 En	ter

-	(Chemical/Materials)	

.

What kinds of tools and equipment did you use?	OH108 Enter Text
(Tools/Equipment)	
How many months per year did you work on this job?	OH109
(months/year)	
On average, about how many hours per week did you work on this job?	OH110
(hours/week)	
While on this job, did you ever work near diesel or other types of engines or did you smell diesel or other types of exhaust?	ОН111
1	Yes No NA DK/R
How did you commute to this job? If there was more than one commuting method, probe for primary, the method that was used for the longest time or for the longest po 1 Bus/Tramway 5 Motorcycle 98 NA 2 Metro/Train 6 Animal 99 DK/R 3 Car 7 Foot Text 4 Bicycle 8 Other (specify)	

How long did it take you to get to this job, one way, from your home?	ОН115
minutes	(hours) code in
	(minutes)
At this job, on average, about how many people around you smoked?	ОН116
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	☐ 10-19 ☐ 20 or more ☐ NA ☐ DK/R
Was your work at this job mostly indoors, mostly outdoors, or about the same amount indoors and outdoors?	OH117 ☐ Mostly Indoors ☐ Mostly Outdoors ☐ Both Indoors and Outdoors ☐ NA ☐ DK/R
What was the primary source of drinking water when you worked there? 1	OH118 Other NA DK/R

END OF OCCUPATIONAL HISTORY

OCCUPATIONAL EXPOSURE

Now, I would like to ask you some questions about things you may have come into contact with, either on or off the job.

Have you ever been exposed, either on the job or off, to any of the following substances or processes for a lifetime total of a year or more? EXAMPLE: If you have been exposed to a substance for 2 months at a time for 6 years or more, that constitutes a lifetime total of a year or more.

Have you ever been exposed to ASBESTO	S (for a year or more)?	OC3
	1 Yes	003
	2 No = Next Substa	nce (OC4)
	99 🗌 DK /R ———	
How long were you exposed to asbestos?		
	0 Less than 1 year	OC3a
	1-70 Years	
	98	
Were you exposed to asbestos at one of the jobs you mentioned earlier?		ОСЗЬ
	1 ☐ Yes, specify job t 2 ☐ No 98 ☐ NA 99 ☐ DK/R	itle [specify]
Have you ever been exposed to DIESEL FUEL or EXHAUST (for a year or more)?	?	OC4

1 Yes

	2 No = Next Subs	stance (OC5)
	99 🗌 DK/ R	
How long were you exposed diesel	fuel or exhaust?	
	0 Less than 1 year	OC4a
	1-70 Years	
	98	·
Were you exposed to this diesel fue	el or exhaust at one of	OC4b
the jobs you mentioned earlier?		
	1 ☐ Yes, specify job title [specify]	ecify]
	98 🔲 NA	
	99	
Have you ever been exposed to GA	SOLINE	
or GASOLINE EXHAUST (for a y more)?	year or	OC5
	1 Yes	
	*2 No = Next Substance (OC6)
	*99 DK /R ———	
How long were you exposed to gase	oline or gasoline exhaust?	OC5a
Jon on page 300		
	0 Less than 1 year 1-70 Years	
	98	
	99	

the jobs you mentioned earlier?	·
1 Yes, specify job title [specify] 2 No 98 NA 99 DK/R	

(for a year or more)?	STUFFS (material or clothing dyes)	OC6
	1 ☐ Yes 2 ☐ No = Next Substance (OC7)	<u> </u>
	99 DK/R —	
How long were you exposed to dyest	uffs?	OC6a
	0 ☐ Less than 1 year 1-70 Years 98 ☐ NA 99 ☐ DK/R	
Were you exposed to dyestuffs at one the jobs you mentioned earlier?	e of	OC6b
2 □ No	1 Yes, specify job title [specify] 98 NA 99 DK/R	
Have you ever been exposed to ORG SOLVENTS (for a year or more)?	ANIC	OC7
(Interviewer: show respondent card B)		
	1 ☐ Yes 2 ☐ No = Next Substance, OC8	
	99 DK/R	
*Interviewer : [go to OC8]		
How long were you exposed to this substance?		OC7a
 1-7	0 Less than 1 year 0 Years	

98 NA 99 DK/R

Were you exposed to organic solvents at one of the jobs you mentioned earlier?	ОС7Ь
1 Yes, specify job title [specify] 2 No 98 NA 99 DK /R	
Have you ever been exposed to DDT (for a year or more)?	OC8
1 ☐ Yes 2 ☐ No = Next Substance, OC9 99 ☐ DK/R	
How long were you exposed to this	
substance? 0	OC8a
Were you exposed to DDT at one of the jobs you mentioned earlier?	OC8b
1 Yes, specify job title 2 No 98 NA 99 DK/R	
Have you ever been exposed to HERBICIDES (for a year or more)?	OC9
1 Yes 2 No = Next Substance OC10	

99 <u></u> DK/R	
How long were you exposed to this substance? O Less than 1 year 1-70 Years 98 NA 99 DK/R	OC9a
Were you exposed to herbicides at one of the jobs you mentioned earlier? 1 Yes, specify job title [specify] 2 No 98 NA 99 DK/R	ОС9Ь
Have you ever been exposed to INSECTICIDES (for a year or more)? 1 Yes 2 No = Next Substance, OC11 99 DK/R	OC10
How long were you exposed to this substance? O Less than 1 year 1-70 Years 98 NA 99 DK/R	OC10a
Were you exposed to insecticides at one of the jobs you mentioned earlier?	[<u>-</u>

1 ☐ Yes, specify job title2 ☐ No

OC10b

98	
Have you ever been exposed to PAINTS (for a year or more)? 1 Yes 2 No = Next Substance, OC12 99 DK/R	OC11
How long were you exposed to this substance?	OC11a
0 Less than 1 year 1-70 Years 98 NA 99 DK/R	
Were you exposed to paints at one of the jobs you mentioned earlier? 1 Yes, specify job title 2 No 98 NA 99 DK/R	OC11b ——
Have you ever been exposed to PAINT THINNERS (for a year or more)? 1 Yes 2 No = Next Substance, OC13	OC12

99 🔲 DK/R	
How long were you exposed to this substance?	
0 Less than 1 year	OC12a
1-70 Years 98 NA 99 DK/R	
Were you exposed to paint thinners at one of	
the jobs previously listed?	OC12b
1 Yes, specify job title 2 No 98 NA 99 DK/R	
Have you ever been exposed to MINERAL, CUTTING, or LUBRICATING OIL (for a year or more)?	OC13
1 Yes 2 No = Next Substance, OC14 99 DK/R	
How long were you exposed to this substance?	
Substance:	OC13a
0 ☐ Less than 1 year 1-70 Years 98 ☐ NA 99 ☐ DK/R	

Were you exposed to mineral, cut the jobs you mentioned earlier?	tting or lubricating oil at one of	OC13b
2 🔲 N 98 🔲 N		
Have you ever been exposed to C PITCH, CREOSOTE, or ASPHA (for a year or more)?		OC14
	1 Yes 2 No = Next Substance, OC15 99 DK/R	
How long were you exposed to the substance?	is 0 ☐ Less than 1 year 1-70 Years 98 ☐ NA	OC14a
Were you exposed to coal, tar, so at one of the jobs you mentioned	99 DK/R ot, pitch, creosote or asphalt	OC14b
	1 Yes, specify job title [specify] 2 No 98 NA 99 DK/R	
Have you ever been exposed to RUBBER or CABLE MAKING (for a year or more)?	1 ☐ Yes 2 ☐ No = Next Substance, OC16	OC15

99 🔲 DK/ R	
How long were you exposed to this substance?	OC15a
0	n 1 year
Were you exposed to rubber or cable making at or the jobs you mentioned earlier?	ne of OC15b
1 [2 [98 [99 [Yes, specify job title [specify] No NA DK/R
Have you ever been exposed to PRINTING INKS (for a year or more)?	OC16 Yes No = Newt Substance OC17
How long were you exposed to this substance?	□ No = Next Substance, OC17 □ DK/ R OC16a
0 1-70 98 99	Less than 1 year Years NA
Were you exposed to printing inks at one of	

the jobs you mentioned earlier?		OC16b
·	1 Yes, specify job title 2 No 98 NA 99 DK/R	,
Have you ever been exposed to PLASTIC PRODUCTION (for a year or more)?		OC17
	1 ☐ Yes 2 ☐ No = Next Substanc 99 ☐ DK/R	e, OC18
How long were you exposed to this		OC17a
substance?		
	0	
Were you exposed to plastic production at the jobs you mentioned earlier?	one of	OC17b
	1 Yes, specify job title 2 No 98 NA 99 DK/R	
Have you ever been exposed to LEATHER PRODUCTION (for a year or more)?		OC18
	1 Yes 2 No = Next Substance 99 DK/R	e, OC19
How long were you exposed to this		

substance?	OC18a
0 1-70 98 99	Less than 1 year Years NA DK/R
Were you exposed to leather production at one of the jobs you mentioned earlier?	ФСG188b
1 2 98 99	Yes, specify job title No NA DK/R
Have you ever been exposed to the LUMBER	OC19
INDUSTRY or WOOD DUST(for a year or more)?	
1 2 99	Yes No = Next Substance, OC20 DK/R
How long were you exposed to this substance?	OC19a
0 [1-70 98 [99 [Less than 1 year Years NA DK/R
Were you exposed to the lumber industry or wood of the jobs you mentioned earlier?	OC19b
1 [Yes, specify job title [specify]

	2 No 98 NA 99 DK/R	
Have you ever been exposed to GLUE OR ADDITIVES (for a year or more)?		OC20
	1 Yes 2 No = Next Substance 99 DK/ R	e, OC21
How long were you exposed to this substance?		OC20a
	0	
Were you exposed to glue or additives at one the jobs you mentioned earlier?	e of	OC20b
	1 Yes, specify job title 2 No 98 NA 99 DK/R	
Have you ever been exposed to METALS or METAL DUST (for a year or more)?		OC21
	1 Yes 2 No = Go to Diet Se	ection, DTX2
	99 🔲 DK/ R	
How long were you exposed to this		

substance?		OC21a
0 [1-70 98 [99 [Less than 1 year Years NA DK/R	
Were you exposed to metals or metal dust At one of the jobs you mentioned earlier?		OC21b
<u> </u>	1 Yes, specify job title2 No	OC21b
	98	

END OF EXPOSURE SECTION

DIET

The next series of questions will be about		DTX2
your diet. The year before [Year of Diet] you change your diet?	did	
	1 Yes 2 No 98 NA 99 DK/R	
[Interviewer if diet has changed in the year before the cuse the prior year for the questionnaire. For instance if the cancer was diagnosed in 2000, but diet changed, not change, use 1999. For controls go back one year.]		
The next questions ask about your use and preparation of meat and eggs during		D001
I will ask the number of times you ate the Foods, as well as how they were made. Some of the Please try to give your best guess. Some different ware pan-frying, deep frying, oven broiling, baking/remicrowaving, and stewing. Interviewer: show card C, show and explain card D	ays to cook foods	
During, how often did you eat eggs ?		DO2a
Interviewer: show card D	1 Never [go to D 3 Less than once 5 Once per mont 7 2-3 times per n 9 Once per week 11 Twice per week 13 3-4 times per v 15 5-6 times per v 17 Once per day 19 Two or more ti 98 NA	per month th nonth k k veek veek

99	□ DK/I	R
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How many eggs did you usually eat per	DO2b
serving ?	1-80enter number 98
During, when you ate eggs, how often were they pan-fried, such as sunny side-up?	DO2c
Interviewer: show card D	
	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R
During,when you ate eggs, how often were they prepared in any other way?	DO2d
Interviewer: other than pan-fried	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R

During, how often did you eat hamburgers and cheeseburgers including	DO3a
fast food ? Interviewer: show card D	
1 1 13 14 17 19 98	Once per month 2-3 times per month Once per week Twice per week 3-4 times per week 5-6 times per week Once per day Two or more times per day NA
What was your usual serving size of hamburgers and cheeseburgers?	DO3b
Interviewer: compared to this example 1-80 98	□ DK
During, when you ate hamburgers and cheeseburgers, how often were they pan fried?	DO3c
Interviewer: show card D Interviewer: show	Once per month 2-3 times per month Once per week Twice per week 3-4 times per week 5-6 times per week Once per day Two or more times per day NA

During, when you ate hamburgers and	DO3d
cheeseburgers, how often were they grilled or barbecued? Interviewer: show card D	
	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per week 19 Two or more times per day 98 NA 99 DK/R
During, when you ate hamburgers and cheeseburgers, how often were they oven-	DO3e
broiled ? Interviewer: show card D	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R

DO3f
1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R
DO5a
 1 Never [go to D07a] 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week
-

<u> </u>	
What was your usual serving size of beef	
steaks?	DO5b
Interviewer: compared to this example	
mier viewer, compared to mis example	
	1.00
	1-80 oz
	98 NA
t	99
Interviewer: show card D	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA
	99 DK/R
	
Daniman and an area of the first of the last	
During, when you ate beef steaks, how	
often were they grilled or barbecued?	DO5d
	<u> </u>
Interviewer: show card D	

1	Never
3	Less than once per month
5	Once per month
7	2-3 times per month
9	Once per week
11	Twice per week
13	3-4 times per week
15	5-6 times per week
17	Once per day
19	Two or more times per day
98	NA
99	DK/R

.

During, when you ate beef steaks, how often were they oven-broiled?	DO5e
Interviewer: show card D	
	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R
During, when you ate beef steaks, how often were they prepared in a way that I	DO5f
haven't mentioned ? Interviewer: show card D	
	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R

During, how often did you eat pork chops or ham steaks ?	D07a
Interviewer: show card D	1 Never [go to D08a] 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R
What was your usual serving size of pork chops or ham steaks? Interviewer: compared to this example	DO7b
	1-80oz 98
During, when you ate pork chops or ham steaks, how often were they pan-fried? Interviewer: show card D	DO7c
	 Never Less than once per month Once per month 2-3 times per month Once per week Twice per week 3-4 times per week

15 5-6 times per week
17 Once per day
19 Two or more times per day
98 🔲 NA
99 🔲 DK/R

During, when you ate pork chops or ham steaks, how often were they oven-broiled? Interviewer: show card D	DO7d
	 Never Less than once per month Once per month 2-3 times per month Once per week Twice per week Twice per week 3-4 times per week 5-6 times per week Once per day Two or more times per day NA DK/R
During, when you ate pork chops or	DO7e
ham steaks, how often were they baked or roasted? Interviewer: show card D	
	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 N/A 99 DK/R

During, when you ate pork chops or ham steaks, how often were they prepared in a way that I haven't mentioned?	DO7f
Interviewer: show card D	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R
During, how often did you eat bacon? Interviewer: show card D	D08a
	 Never [go to D09a] Less than once per month Once per month 2-3 times per month Once per week Twice per week 3-4 times per week 5-6 times per week Once per day Two or more times per day NA DK/R
How many strips of bacon did you usually eat? Interviewer: in number of strips	DO8b
	1-80 strips 98 N/A 99 DK/R

During, when you ate bacon how often was it pan-fried?	DO8c
Interviewer: show card D	
	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R
During, when you ate bacon, how often was it grilled or barbecued ?	DO8d
Interviewer: show card D	
	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R

During, when you ate bacon, how often was it oven-broiled?	DO8e
Interviewer: show card D	
	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R
During, when you ate bacon, how often was it microwaved? Interviewer: show card D	DO8f
	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R

During, when you ate bacon, how often was it prepared in a way that I haven't mentioned? Interviewer: show card D	DO8g
	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R
During, how often did you eat sausage (including breakfast, Italian, Polish, and bratwurst)? Interviewer: show card D	DO9a
	 Never [go to D10a] Less than once per month Once per month 2-3 times per month Once per week Twice per week Twice per week 3-4 times per week 5-6 times per week Once per day Two or more times per day NA DK/R
What was your usual serving size of sausage? Interviewer: 1 large(Polish, Bratwurst etc.)or 2 small(patties or links)= 1 serving	DO9b
	1-80servings 98

DO9c
ıth
40
day
DO9d
DO9d
DO9d
DO9d th
nth

During, when you ate sausage, how often was it oven-broiled?	DO9e
Interviewer: show card D	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R
During, when you ate sausage, how often was it microwaved? Interviewer: show card D	DO9f Never Less than once per month Once per month Conce per month Conce per week Twice per week Twice per week Selection of the selection of

During, when you ate sausage, how often was it prepared in a way that I		D09g
haven't mentioned ? Interviewer: show card D		
	1 Never 3 Less than once per m 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times p 98 NA 99 DK/R	
During, how often did you eat hot dogs or franks? Interviewer: show card D (remind subject of corn	dogs, etc.)	D10a
	1 Never [go to D11a] 3 Less than once per m 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times p 98 NA 99 DK/R	
What was your usual serving size of hot dogs or franks? Interviewer: in number of hot dogs		D10b
	1-80 hot dogs 98 NA 99 DK/R	

During, when you ate hot dogs or franks, how often were they pan-fried? Interviewer: show card D	D10c
	 Never [go to D26a] Less than once per month Once per month Question on the per month Once per week Twice per week Twice per week 3-4 times per week 5-6 times per week Once per day Two or more times per day NA DK/R
During, when you ate hot dogs or franks, how often were they oven-broiled? Interviewer: show card D	D10d
	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R

During, when you ate hot dogs or franks, how often were they grilled or barbecued? Interviewer: show card D	D10e
	 Never Less than once per month Once per month 2-3 times per month Once per week Twice per week 3-4 times per week 5-6 times per week Once per day Two or more times per day NA DK/R
During, when you ate hot dogs or franks, how often were they prepared in a	D10f
way that I have not mentioned? Interviewer: show card D	
	 Never Less than once per month Once per month 2-3 times per month Once per week Twice per week 3-4 times per week

During, how often did you eat fried chic Interviewer: show card D	D11a _
Remind subject of chicken strips & chicken nuggets.	1 Never [go to D12a] 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R
What was your usual serving size of fried chicken? Interviewer: compared to these examples	D11b
	1-80oz 98
During, when you ate fried chicken, how often was it deep fat fried/fast food? Interviewer: show card D	D11c
	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R

During, when you ate fried chicken, how often was it pan fried ?		D11d
Interviewer: show card D		
	1 Never 3 Less than once per m 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times p 98 NA 99 DK/R	
Other than fried chicken, during, how often did you eat chicken or turkey (including on sandwiches)? Interviewer: show card D		D12a
	1 Never [go to D13a] 3 Less than once per m 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times p 98 NA 99 DK/R	
What was you usual serving size of the chicken or turkey? Interviewer: compared to this example		D12b

	99 🗌 DK/R
During, when you ate chicken or turkey, how often was it baked or roasted? Interviewer: show card D	D12c
	1
During, when you ate chicken or turkey, how often was it stewed?	D12d
Interviewer: show card D	
	 Never Less than once per month Once per month 2-3 times per month Once per week Twice per week 3-4 times per week 5-6 times per week Once per day Two or more times per day NA DK/R

During, when you ate chicken or turkey, how often was it oven-broiled? Interviewer: show card D	D12e
	 Never Less than once per month Once per month 2-3 times per month Once per week Twice per week 3-4 times per week 5-6 times per week Once per day Two or more times per day NA DK/R
During, when you ate chicken or	D12f
turkey, how often was it grilled or barbecued? Interviewer: show card D	
	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R

During, when you ate chicken or turkey, how often was it prepared in a way that I have not mentioned? Interviewer: show card D	D12g
	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R
During, how often did you eat fried fish or fish sandwiches (including other fried seafood) ? Interviewer: show card D	D13a
	1 Never [go to D14a] 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R
What was your usual serving size of fried fish or fish sandwich? Interviewer: compared to these examples	1-80 oz 98 NA 99 DK/R

During, when you ate fried fish or a fish sandwich, how often were they panfried?	D13c
Interviewer: show card D	 Never Less than once per month Once per month 2-3 times per month Once per week Twice per week 3-4 times per week 5-6 times per week Once per day Two or more times per day NA DK/R
During, when you ate fried fish or a ish sandwich, how often were they deep fat ried or fast food? Interviewer: show card D	D13d
	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R

During, how often did you eat other fish besides fried fish (including tuna and shrimp)?	D14a
Interviewer: show card D	1 Never [go to D15a] 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R
What was your usual serving size of other fish besides fried fish? Interviewer: compared to these examples	D14b
	1-80 oz 98 NA 99 DK/R
During,when you ate other fish besides	
fried fish, how often was it oven-broiled?	D14c
Interviewer: show card D	
	1 Never3 Less than once per month

	17 Once per day 19 Two or more times per day 98 NA 99 DK/R
During, when you ate other fish besides fried fish, how often was it baked? Interviewer: show card D	D14d
	 Never Less than once per month Once per month 2-3 times per month Once per week Twice per week 3-4 times per week 5-6 times per week Once per day Two or more times per day NA DK/R
During, when you ate other fish besides fried fish, how often was it in a casserole?	D14e
Interviewer: show card D	1 Nove
	 Never Less than once per month Once per month 2-3 times per month Once per week Twice per week Twice per week 3-4 times per week 5-6 times per week Once per day Two or more times per day NA DK/R

During, when you ate other fish besides fried fish, how often was it in a salad? Interviewer: show card D ie. tuna salad, with mayo, cucumber, pickles, etc.	D14f Never Less than once per month Once per month Conce per week Twice per week Twice per week Set once per week Twice per week Conce per week Twice per week Management of the per week Two or more times per day NA NA DK/R
During, when you ate other fish besides fried fish, how often was it prepared in a way that I have not mentioned? Interviewer: show card D	D14g
	 Never Less than once per month Once per month 2-3 times per month Once per week Twice per week Twice per week 3-4 times per week 5-6 times per week Once per day Two or more times per day

	98
During, how often did you eat roast beef (including sandwiches)?	D15a
Interviewer: show card D	1 Never [go to D16a] 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R
What was your usual serving size of roast beef?	D15b
Interviewer: compared to these examples	1-80oz 98
During, how often did you eat beef stew or potpie with carrots or other vegetables? Interviewer: show card D	D16a

	1 Never [go to D17a] 3 Less than once per m 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times p 98 NA 99 DK/R	
What was your usual serving size of beef stew or potpie with carrots or other vegetables? Interviewer: compared to this example		D16b
	1-80 oz 98 NA 99 DK/R	
During, how often did you eat other ground beef (include meat loaf or taco)? Interviewer: show card D1		D17a
	Never [go to D18a] Less than once per m Conce per month Conce per week Twice per week Less than once per month Conce per week Conce	
What was your usual serving size of ground beef?		D17b

Interviewer: 1 cup = 8 ounces	1-80 oz	
	98	L
During, how often did you eat meat gravies made with meat drippings?		D18a
Interviewer: show card D	1 Never [go to D19a] 3 Less than once per 5 Once per month 7 2-3 times per mont 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times 98 NA 99 DK/R	month
What was your usual serving size of meat gravies? Interviewer: compared to this example of 2 tab	lespoons	D18b
1 Tablespoon = 3 teaspoons	1-80 teaspoons 98 NA 99 DK/R	
During, how often did you eat ham, bologna, salami, and other lunch meats?		D19a
(Not including chicken, turkey or roast beef; asl Interviewer: show card D	ked before.)	
	1 Never [go to D20a] 3 Less than once per 5 Once per month 7 2-3 times per mont 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day	month

	19 Two or more times p 98 NA 99 DK/R	er day
What was your usual serving size of ham, bologna, salami, and other luncheon meats?		D19b
Interviewer: compared to this example		
	1-80oz 98	
During , how often did you eat spaghetti,		
During, how often did you eat spaghetti, lasagna, or pasta with tomato and meat sauce ?		D20a
		D20a
asagna, or pasta with tomato and meat sauce?	1 □ Never [go to D21a]	D20a
asagna, or pasta with tomato and meat sauce?	1 Never [go to D21a] 3 Less than once per m	
asagna, or pasta with tomato and meat sauce?	3 Less than once per m5 Once per month	
asagna, or pasta with tomato and meat sauce?	 3 Less than once per m 5 Once per month 7 2-3 times per month 	
asagna, or pasta with tomato and meat sauce?	 3 Less than once per m 5 Once per month 7 2-3 times per month 9 Once per week 	
asagna, or pasta with tomato and meat sauce?	 3 Less than once per m 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 	
asagna, or pasta with tomato and meat sauce?	 3 Less than once per m 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 	
asagna, or pasta with tomato and meat sauce?	 3 Less than once per m 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 	
asagna, or pasta with tomato and meat sauce?	3 Less than once per m 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times p	onth
asagna, or pasta with tomato and meat sauce?	3 Less than once per m 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times p 98 NA	onth
asagna, or pasta with tomato and meat sauce?	3 Less than once per m 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times p	onth

lasagna, or pasta with tomato and meat	sauce?	D20b
Interviewer: 1 cup = 8 ounces		
	1-80oz 98	
During, how often did you eat soups containing meat such as vegetable beef, chicken, etc? Interviewer: show card D	1 Never [go to D22a] 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R	D21a
What was your usual serving size of soup containing meat such as vegetable beef, chicken, etc? Interviewer: 1 cup = 8 ounces	1-80oz 98NA	D21b
During, how often did you eat toast any meal? Interviewer: show card D		D22a

	7	
What was your usual serving size of toast Interviewer: in number of slices	?	D22b
	1-80 (slices) 98 NA 99 DK/R	
During, when you ate the toast, how was it usually toasted?		D22c
Interviewer: show card D2	1 ☐ Did not eat 3 ☐ Light 5 ☐ Medium 7 ☐ Dark 9 ☐ Very dark 98 ☐ NA 99 ☐ DK/R	

During, how often did you eat fried bread (2 hushpuppies = 1 slice)? Interviewer: show card D3	D23a
	 Never [go to D24a] Less than once per month Once per month 2-3 times per month Once per week Twice per week Twice per week 3-4 times per week 5-6 times per week Once per day Two or more times per day NA DK/R
What was your usual serving size of fried bread (2 hushpuppies = 1 slice)? Interviewer: in number of slices	D23b
	1-80slices 98
During, how often did you eat fats, saved after bread, for example, bacon fat ? Interviewer: show card D	cooking, on D24a
	 Never [go to D26a] Less than once per month Once per month 2-3 times per month Once per week Twice per week Twice per week 3-4 times per week 5-6 times per week Once per day Two or more times per day DK R

.

What was your usual serving size of fats on bread that were saved after cooking?	D24b
Interviewer: In number of slices	
	1-80Slices 98
During, when you ate hamburgers or cheeseburgers, how were they usually	D26
cooked? Interviewer: show card D4	1 Did not eat 3 Rare 5 Medium rare 7 Medium 9 Medium well 11 Well-done 13 Very well-done 98 NA 99 DK/R
During, when you ate steak, how was it usually cooked ?	D27
Interviewer: show card D4	1 Did not eat 3 Rare 5 Medium rare 7 Medium 9 Medium well 11 Well-done 13 Very well-done 98 NA 99 DK/R

During, when you ate chicken, how was it usually cooked?		D28
Interviewer: show card D5	1 Did not eat 3 Just until done 5 Well-done 7 Very well-done 98 NA 99 DK/R	
During, when you ate pork chops or ham steaks, how was they usually cooked?		D29
Interviewer: show card D5		
	1 Did not eat 3 Just until done 5 Well-done 7 Very well-done 98 NA 99 DK/R	
During, when you ate hot dogs or franks, how were they usually cooked? Interviewer: show card D6	1 Did not eat 3 Just until done 5 Well-done/crisp 7 Charred 98 NA 99 DK/R	D30
During, when you ate bacon, how was it usually cooked?	Interviewer: show card D6 1	D31

During, when you ate sausage, how was it usually cooked? Interviewer: show card D6	D32
	1 Did not eat 3 Just until done 5 Well-done/crisp 7 Charred 98 NA 99 DK/R
During, when you ate gravies how were they usually cooked?	D33
	 Did not eat Made from meat drippings Store bought cans Store bought packets NA DK/R
During, how often did you use the fat from fried bacon in your cooking? Interviewer: show card D	D34
	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R

In the summer months, how often did you eat grilled or barbecued meats (including beef,	D35
pork, chicken, or fish)?	
Interviewer: show card D	1 Never 3 Less than once per month 5 Once per month 7 2-3 times per month 9 Once per week 11 Twice per week 13 3-4 times per week 15 5-6 times per week 17 Once per day 19 Two or more times per day 98 NA 99 DK/R
During the remainder of the year, how often did you eat grilled or barbecued meats (including beef, pork, chicken, or fish)? Interviewer: show card D	D36
	1 Never
	3 Less than once per month
	5 Once per month
	7 2-3 times per month 9 Once per week
	11 Twice per week
	13 3-4 times per week
	15 5-6 times per week
	17 Once per day
	19 Two or more times per day
	98 🔲 NA
	99 🔲 DK/R
During, when you had grilled or barbecued meats, how often were they charred? Interviewer: show card D7	D37 1 Never 3 About ¼ of the time 5 About ½ of the time 7 About ¾ of the time 9 About 100% of the time 11 Did not eat 98 NA 99 DK/R

During, when you had pan-fried or oven-broiled meats, how often were they			
well-browned ? Interviewer: show card D7	1 Never 3 About ¼ of the time 5 About ½ of the time 7 About ¾ of the time 9 About 100% of the time 11 Did not eat pan-fried or oven-broiled meats 98 NA 99 DK/R		
Now I would like you to look at some photographs of meats which have been cooked to different degrees. (Open book to first set of photos) Please decide which photograph most closely resembles the way meat you eat is cooked. If you eat meat that looks to be between categories, you may indicate that. For example, you would select 2.5 to indicate that the meat you eat looks between pictures 2 and 3. Let's start with beef. Please pay special attention to the way hamburger and steaks look inside as well as outside. For example, there is little difference in the internal appearances of the meat between numbers 3 and 4 for both hamburgers and steaks, but there is more browning and charring on the external surface of number 4 as compared to number 3.			
During, when you ate hamburgers, which picture most closely resembles the way they were usually cooked?	D40		
(Interviewer: show photograph of hamburgers and cheeseburger)			
0 [0.5 [1.0 [1.5 [2.0 [2.5 [3.0 [4.0 [4.5 [98 [Did not eat		

the way they were usually cooked?	n picture most closely resembles	D41
(Interviewer: show photograph of steaks))	
0.5 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 98	0	
During, when you ate ham steaks the way they were usually cooked? (Interviewer: show photograph of ham ste		D42
	0	

During, when you pork chops, which picture most closely res	embles D43
the way they were usually cooked? (Interviewer: show photograph of pork chops)	
0 Did not eat	
0.5 Did not car	
1.0	
1.5	
2.0	
2.5	
3.0	
3.5	
4.0 🔲	
4.5	
98 NA	
99 DK/R	
During, when you ate hot dogs, which picture most closely res the way they were usually cooked? (Interviewer: show photograph of hot dogs) 0	mbles D44

0 Did not eat
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
98 NA
99
99 <u> </u>

END OF DIET SECTION

MEDICAL and FAMILY HISTORY

MEDICAL HISTORY:

Now I am going to ask you about your medical and family history.		
Since birth, have you ever had diabetes?	1 ☐ Yes 2 ☐ No (go to next section) 98 ☐ NA 99 ☐ DK/R	MH1
What was your age when you first learne that you had diabetes?	d	MH1a
	1 (enter age) 97	
Did you take insulin?		MH1b
·	1 ☐ Yes 2 ☐ No 98 ☐ NA 99 ☐ DK/R	

END OF MEDICAL and FAMILY HISTORY

FAMILY HISTORY:

In this section of the questionnaire I would like to ask you about the health history of your immediate blood relatives. This would include your mother, father, sisters, brothers and children. I am interested in living and deceased members of your family, but I am interested only in your full blood relatives not half or adopted relatives.

I am going to start with your parents. Interviewer: Please read across. ie: complete questions about mother first then move to father.

How old was (HE/SHE)

Is your (Relative) still living? | How old is (HE/SHE)?

	,	when (HE/SHE) died?	
F001 Mother	F002 Mother	F003 Mother	
1 Yes	ENTER AGE	ENTER AGE	
2 No (go to F003)	99 DK (go to F004)	99 🔲 DK	
99 DK (go to F004)		·	
F013 Father	F014 Father	F015 Father	
1 Yes	ENTER AGE*	ENTER AGE	
2 No (go to F015)	99 □ DK*	99 🔲 DK	
99 DK (go to F016)	*(go to F016)		
Cancer Types (Interviewer:	show card E)		
1 Skin (not melanoma) 12 Melanoma		
2 Lung	13 Oral Cavity		
3 Breast	14 Ovary		
4 Colon	15 Pancreas		
5 Prostate	16 Rectum		
6 Bladder	17 Stomach		
7 Brain	18 Uterus (corpus uteri)		
8 Cervix	19 Other Cancer (specify)		
9 Kidney	20 Cancer of female reproductive organs: site unknown		
10 Leukemia	21 Cancer of the large bowel (colon/rectum)		
site unknown			
11 Lymphoma	22 Relative had cancer; site unknown		
Was your (Relative) ever	What was the first type of	How old was (HE/SHE)	
diagnosed as having any	cancer your (Relative) had?	when this cancer was	

Was your (Relative) ever diagnosed as having any type of cancer?	What was the first type of cancer your (Relative) had?	How old was (HE/SHE) when this cancer was diagnosed?
F004 Mother	F005 Mother	F006 Mother
1 Yes		enter age
2 No (go to F025a)	write cancer name and #	000 <1 year old
99 DK (go to F025a)	(see list above)	99 🔲 DK
F016 Father	F017 Father	F018 Father
1 Yes		enter age
2 No (go to F025a)	write cancer name and #	000
99 DK (go to F025a)	(see list above)	99 DK

Cancer Ty	'pes		
	Skin (not melanoma)	12	Melanoma
2	Lung	13	Oral cavity
3	Breast	14	Ovary
4	Colon	15	Pancreas
5	Prostate	16	Rectum
6	Bladder	17	Stomach
7	Brain	18	Uterine (corpus uteri)
8	Cervix	19	Other cancer (specify)
9	Kidney	20	Cancer of female reproductive organs, site unknown
10	Leukemia	21	Cancer of the large bowel (colon/rectum), site unknown
11	Lymphoma	22	Relative had cancer, site unknown

Did your (RELATIVE) have any other cancer?	What was the next type of cancer your (RELATIVE) had?	How old was (HE/SHE) when this cancer was diagnosed?
F007 Mother 1 Yes 2 No (go to F020) 99 DK (go to F020)	write cancer name and # (see list above)	F009 Mother enter age 000 <1 year old 99 DK
F019 Father 1 ☐ Yes 2 ☐ No (go to FTX1) 99 ☐ DK (go to FTX1)	F020 Father write cancer name and # (see list above)	F021 Father enter age 000 <

Did your (RELATIVE) have any other cancer?	What was the next type of cancer your (RELATIVE) had?	How old was (HE/SHE) when this cancer was diagnosed?	
F010 Mother 1 Yes	F011 Mother	F012 Mother enter age	
2 No (go to F020) 99 DK (go to F020)	write cancer name and # (see list above)	000	
F022 Father 1 Yes	F023 Father	F024 Father enter age	
2 No (go to FTX1) 99 DK (go to FTX1)	write cancer name and # (see list above)	000	

Now I would like to ask you the same questions about your <u>full</u> brothers and sisters. Please include those who are living or deceased, but do not include adopted, foster, half or step brothers and sisters.

How many full brothers and sisters do you	FTX1		
have? Again, please include any who may have died.			
F025a brothers enter number	F025a		
0 None 98 NA 99 DK/R F025b sisters enter number	F025b		
0 None 98 NA 99 DK/R			
Interviewer: Enter total number of siblings			

Note: a response followed by an alphanumeric in brackets: (FXXX) indicates that if this response is given, the interviewer should proceed to the question described by the alphanumeric. Interviewers should complete each page from top to bottom before asking the next set of questions in the numeric sequence. For example, complete name column first then go back to first sibling and ask questions across a row. In order to be consistent, it is important that each question be asked and each response be recorded in a simliar manner. Therefore, all interviewers must follow tha same technique.

	What are the first	What is	Is (name) still	How old is	How old was
	names of your	(names) sex?	living?	(name) ?	(name) when
ľ	brothers or sisters?	((he/she) died?
	F026 oldest	F027	F028	F029	F030
Į	name	1 Male	l 1□ Yes	enter age	enter age
1	98 NA (F027)	2 Female	2 No (F030)	99 DK (F031)	00 < 1 year old
L	99 DK/R	99 DK	99 DK (F031)		99 DK (F031)
	F040 next	F041	F042	F043	F044
	name	1 Male	l ∏ Yes	enter age	enter age
2	00 None [nxt sec]	2 Female	2 No (F044)	ļ <u>_</u>	00 < 1 year old
	99_DK	99 DK	99 DK (F045)	99 DK (F045)	99 DK (F045)
	F054 next	F055	F056	F057	F058
	name	1 Male	1 Yes	enter age	enter age
3	00 None [nxt sec]	2 Female	2 No (F058)		00 < 1 year old
	99_DK	99 DK	99 DK (F059)	99 DK (F059)	99 DK (F059)
	F068 next	F069	F070	F071	F072
	name	1 Male	1 Yes	enter age	enter age
4	00 None [nxt sec]	2 Female	2 No (F072)	OOD DY (EOGO)	00 < 1 year old
	99_DK	99 DK	99 DK (F073)	99 DK (F073)	99 DK (F073)
	F082 next	F083	F084	F085	F086
_	name	1 Male	1 Yes	enter age	enter age
5	00 None [nxt sec]	2 Female	2 No (F086)	00[] DX (E007)	00 < 1 year old
	99 DK	99 DK	99 DK (F087)	99 DK (F087)	99 DK (F087)
	F096 next	F097 1 Male	F098 1	F099	F100
6	name 00 None [nxt sec]	2 Female	1	enter age	enter age 00 < 1 year old
U	99 DK	99 DK	99 DK (F101)	99 DK (F101)	99 □ DK (F101)
	F110 next	F111	F112	F113	F114
	name	1 Male	l Yes	enter age	enter age
7	00 None [nxt sec]	2 Female	2 No (F114)	00 (E115)	00 < 1 year old
لــــا	99_DK	99 DK	99 DK (F115)	99 (F115)	99_DK (F115)

Interviewer: write the total number of siblings here:

Write in brothers' and sisters' first names on following pages now.

[nxt sec] = questions of medical history of children

Cancer T	<u>ypes</u>		
1	Skin (not melanoma)	12	Melanoma
2	Lung	13	Oral cavity
3	Breast	14	Ovary
4	Colon	15	Pancreas
5	Prostate	16	Rectum
6	Bladder	17	Stomach
7	Brain	18	Uterine (corpus uteri)
8	Cervix	19	Other cancer (specify)
9	Kidney	20	Cancer of female reproductive organs: site unknown
10	Leukemia	21	Cancer of the large bowel (colon/rectum),
			site unknown
11	Lymphoma	22	Relative had cancer: site unknown

	Was (first name) ever diagnosed as	What was the first type of cancer	How old was (HE/SHE)
	having any type of cancer?	(NAME) had?	when this cancer was
		()	diagnosed?
1	F031	F032	F033
_	1 Yes		enter age
l	2 No (F045) sibling name	1.4	$00 \le 1$ year old
l	99 DK	write in cancer name and #	99 DK (F034)
		(see list above)	
2	F0 <u>45</u>	F046	F047
l	1 Yes		enter age
	2 No [nxt sec] sibling name	write in cancer name and #	00 <1 year old
l	99 DK	(see list above)	99 DK (F048)
3	F059	F060	F061
3	1	1 1000	1
	1 Yes		enter age
	2 No [nxt sec] sibling name	write in cancer name and #	00 <1 year old
	99□ DK	(see list above)	99 DK (F062)
4	F073	F074	F075
	1 Yes		enter age
	2 No [nxt sec] sibling name	write in cancer name and #	$00 \subseteq <1$ year old
	99 DK	(see list above)	99 DK (F076)
5	F087	F088	<u> </u>
٦	1 = - <u></u>	F088	F089
	1 Yes		enter age
	2 No [nxt sec] sibling name	write in cancer name and #	$00 \square < 1 \text{ year old}$
	99□ DK	(see list above)	99 DK (F090)
	1		
6	F101	F102	F103
U	1 Yes	F102	į –
			enter age
	2 No [nxt sec] sibling name	write in cancer name and #	00 <1 year old
	99□ DK	(see list above)	99 DK (F104)
7	F115	F116	F117
	1 Yes		enter age
	2 No [nxt sec] sibling name	write in cancer name and #	00 <1 year old
	99□ DK	(see list above)	99 DK (F118)
	,	(555 1155 455 15)	· · · ·

Interviewer: write the total number of siblings here:

Cancer Types	
1. Skin (not melanoma)	12. Melanoma
2. Lung	13. Oral Cavity
3. Breast	14. Ovary
4. Colon	15. Pancreas
5. Prostate	16. Rectum
6. Bladder	17. Stomach
7. Brain	18. Uterine (corpus uteri)
8. Cervix	19. Other cancer (specify)
9. Kidney	20. Cancer of female reproductive organs; site unknown
10. Leukemia	21. Cancer of the large bowel (colon/rectum), site unknown
11. Lymphoma	22. Relative had cancer; site unknown

	Did (first name) have any other	What was the second type of cancer	How old was (HE/SHE)
ł	cancer?	(NAME) had?	when this cancer was
			diagnosed?
1	F034	F035	F036
-	1 Yes		enter age
	2 No (F048) sibling name	1.4	$00 \le 1$ year old
	99 DK	write in cancer name and #	99 DK (F037)
		(see list above)	ļ <u> </u>
2	F048	F049	F050
	1 Yes		enter age
	2 No [nxt sec] sibling name	write in cancer name and #	$00 \square < 1$ year old
	99 DK	(see list above)	99 DK (F051)
<u> </u>			<u> </u>
3	F062	F063	F064
	1 Yes		enter age
1	2 No [nxt sec] sibling name	write in cancer name and #	00 <1 year old
	99□ DK	(see list above)	99□ DK (F065)
4	F076	F077	F078
	1 Yes		enter age
	2 No [nxt sec] sibling name		$00 \le 1$ year old
	99 DK	write in cancer name and #	
		(see list above)	99 DK (F079)
5	F090	F091	F092
	1 Yes		enter age
	2 No [nxt sec] sibling name	write in cancer name and #	00 <1 year old
ŀ	99 DK	(see list above)	99 DK (F093)
	_	(See list above)	
6	F104	F105	F106
	1 Yes		enter age
	2 No [nxt sec] sibling name	1 11	$00 \le 1$ year old
	99 DK	write in cancer name and #	
l	35[_] DK	(see list above)	99 DK (F107)
7	F118	F119	F120
l <i>'</i>	1 Yes	F.117	
			enter age
	2 No [nxt sec] sibling name	write in cancer name and #	00 <1 year old
	99□ DK	(see list above)	99 DK (F121)

Interviewer: write the total number of siblings here:

Cancer Types			
	Skin (not melanoma)	12.	Melanoma
2.	Lung	13.	Oral Cavity
3.	Breast	14.	Ovary
4.	Colon	15.	Pancreas
5.	Prostate	16.	Rectum
6.	Bladder	17.	Stomach
7.	Brain	18.	Uterine (corpus uteri)
8.	Cervix	19.	Other cancer (specify)
9.	Kidney	20.	Cancer of female reproductive organs; site unknown
10.	Leukemia	21.	Cancer of the large bowel (colon/rectum), site unknown
11.	Lymphoma	22.	Relative had cancer; site unknown

	Did (first name) have any other cancer?	What was the third type of cancer (NAME) had?	How old was (HE/SHE) when this cancer was
1	F037	F038	diagnosed?
^	1 Yes		enter age
	2☐ No (F051) sibling name 99☐ DK	write in cancer name and # (see list above)	00 < 1 year old 99 DK (F124)
2	F051	F052	F053
	1 Yes	write in cancer name and # (see list above)	enter age 00 < 1 year old 99 DK (F138)
3	F065	F066	F067
	1 Yes 2 No [nxt sec] sibling name 99 DK	write in cancer name and # (see list above)	enter age 00 < 1 year old 99 DK (F152)
4	F079	F080	F081
	1 Yes	write in cancer name and # (see list above)	enter age 00 < 1 year old 99 DK (F166)
5	F093	F094	F095
	1 Yes	write in cancer name and # (see list above)	enter age 00 < 1 year old 99 DK (F180)
6	F107	F108	F109
	1 Yes	write in cancer name and # (see list above)	enter age 00 < 1 year old 99 DK (F194)
7	F121	F122	F123
	1 Yes	write in cancer name and # (see list above)	enter age 00 < 1 year old 99 DK (F208)

Interviewers: write the total number of siblings here: ______.

	What is the first	What is	Is (name) still	How old is	How old was
ĺ	name of your (next)	(name) sex?	living?	(name)?	(name) when
	brother or sister?				(he/she) died?
8	F124	F125	F126	F127	F128
	name	1☐ Male	1 Yes	enter age	enter age
	00 None(nxt sec)	2 Female	2 No (F128)		$00 \square < 1$ year old
	99∏DK ` ´	99 DK	99 DK (F129)	99 DK (F129)	99 DK (F129)
9	F138	F139	F140	F141	F142
	name	1 Male	1 Yes	enter age	enter age
[00 None	2 Female	2 No (F142)		00 <1 year old
l	99 <u></u> DK	99∏ DK	99 DK (F143)	99 DK (F143)	99 DK (F143)
10	F152	F153	F154	F155	F156
	name	1☐ Male	1 Yes	enter age	enter age
	00 None	2 Female	2 No (F156)		$00 \square < 1$ year old
	99□DK	99□ DK	99 DK (F157)	99 DK (F157)	99 DK (F157)
11	F166	F167	F168	F169	F170
	name	1☐ Male	1 Yes	enter age	enter age
	00 None	2 Female	2 No (F170)		$00 \square < 1$ year old
	99□DK	99 DK	99 DK (F171)	99 DK (F171)	99□ DK (F171)
12	F180	F181	F182	F183	F184
	name	1 Male	1 Yes	enter age	enter age
	00 None None	2 Female	2 No (F184)		$00 \square < 1$ year old
	99□DK	99□ DK	99 DK (F185)	99 DK (F185)	99□ DK (F185)
13	F194	F195	F196	F197	F198
	name	1☐ Male	1□ Yes	enter age	enter age
	00 None	2 Female	2□ No (F198)		$00 \square < 1$ year old
	99 <u>□</u> DK	99□ DK	99 DK (F199)	99 DK (F199)	99 DK (F199)
14	F208	F209	F210	F211	F212
	name	1☐ Male	1□ Yes	enter age	enter age
	00 None	2 Female	2 No (F212)	_	00 <1 year old
	99□DK	99□ DK	99 DK (F213)	99 DK (F213)	99 DK (F213)

Interviewer: write the total number of siblings here: ______.

	Cancer Types		
	 Skin (not melanoma) 	12. Melanoma	
	2. Lung	13. Oral cavity	
	3. Breast	14. Ovary	
	4. Colon	15. Pancreas	
	5. Prostate	16. Rectum	
	6. Bladder	17. Stomach	
	7. Brain	18. Uterine (corpus uteri)	
	8. Cervix	19. Other cancer (specify)	
	9. Kidney	20. Cancer of female reproduc	ctive organs;
	·	site unknown	
	10. Leukemia	21. Cancer of the large bowel	(colon/rectum),
		site unknown	
	11. Lymphoma	22. Relative had cancer, site u	ınknown
	Was (first name) ever diagnosed as	What was the first type of cancer	How old was (HE/SHE)
	having any type of cancer?	(NAME) had?	when this cancer was
			diagnosed?
8	F129	F130	F131
	1 ☐ Yes		enter age
	2 No (F143) name	write in cancer name and #	00 <1 year old
	99□DK	(see list above)	99 DK (F132)
9	F143	F144	F145
	1 Yes	1111	enter age
	2 No [nxt sec] name	write in cancer name and #	00 <1 year old
	99 □ DK		99 DK (F146)
10		(see list above)	
10	F157 1	F158	F159
			enter age
	2 No [nxt sec] sibling name 99 DK	write in cancer name and #	00 <1 year old
		(see list above)	99 DK (F160)
11	F171	F172	F173
	1 Yes		enter age
	2 No [nxt sec] sibling name	write in cancer name and #	00 <1 year old
	99□DK	(see list above)	99□ DK (F174)
12	F185	F186	F187
14	1	F100	1
	2 No [nxt sec] sibling name		enter age 00 <1 year old
	99 DK	write in cancer name and #	99 DK (F188)
		(see list above)	
13	F199	F200	F201
	1 Yes	-	enter age
	2 No [nxt sec] sibling name	write in cancer name and #	00 <1 year old
	99□DK	(see list above)	99□ DK (F202)
14	F213	F214	F215
	1 ☐Yes		enter age
	2 No [nxt sec] sibling name	write in cancer name and #	00 <1 year old
	99 DK	(see list above)	99 DK (F216)
		(see list above)	
_			

Interviewer: write the total number of siblings here:

ancer Typ	<u>oes</u>	
1. S	Skin (not melanoma) 12.	Melanoma
2. I	Lung 13.	Oral cavity
3. E	Breast 14.	Ovary
4. (Colon 15.	Pancreas
5. F	Prostate 16.	Rectum
6. E	Bladder 17.	Stomach
7. E	Brain 18.	Uterine (corpus uteri)
8. C	Cervix 19.	Other cancer (specify)
9. k	Kidney 20.	Cancer of female reproductive organs; site unknown
10. I	Leukemia 21.	Cancer of the large bowel(colon/rectum site unknown
11. I	Lymphoma 22.	Relative had cancer site; unknown

	Did (first name) have any other	What was the second type of	How old was
	cancer?	cancer (NAME) had?	(HE/SHE) when this
			cancer was diagnosed?
8	F1 <u>32</u>	F133	F134
	1 Yes		enter age
	2 No (F146) sibling name	write in cancer name and #	00 <1 year old
	99∏DK	(see list above)	99□ DK (F135)
9	F146	F147	F148
	1 ☐ Yes		enter age
	2 No [nxt sec] sibling name	write in cancer name and #	00 <1 year old
	99∏DK	(see list above)	99□ DK (F149)
10	F160	F161	F162
	1 Yes		enter age
	2 ☐No [nxt sec] sibling name	write in cancer name and #	00
	99∏DK	(see list above)	99□ DK (F163)
11	F174	F175	F176
	1 Yes		enter age
	2☐No [nxt sec] sibling name	write in cancer name and #	00 <1 year old
	99□DK	(see list above)	99□ DK (F177)
12	F188	F189	F190
	1 Yes		enter age
	2 ☐No [nxt sec] sibling name	write in cancer name and #	00 <1 year old
	99 DK	(see list above)	99 DK (F191)
13	F202	F203	F204
	1 Yes		enter age
	2 ☐No [nxt sec] sibling name	write in cancer name and #	00 <1 year old
	99DK	(see list above)	99□ DK (F205)
14	F2 <u>16</u>	F217	F218
	1 Yes	·	enter age
	2 No [nxt sec] sibling name	write in cancer name and #	00 < 1 year old
	99 □ DK	(see list above)	99 DK (F219)

Interviewer: write the total number of siblings here: ______.

Cancer Types	
1. Skin (not melanoma)	12. Melanoma
2. Lung	13. Oral cavity
3. Breast	14. Ovary
4. Colon	15. Pancreas
5. Prostate	16. Rectum
6. Bladder	17. Stomach
7. Brain	18. Uterine (corpus uteri)
8. Cervix	19. Other cancer (specify)
9. Kidney	20. Cancer of female reproductive organs; site unknown
10. Leukemia	21. Cancer of the large bowel(colon/rectum site unknown
11. Lymphoma	22. Relative had cancer; site unknown

	Did (first name) have any other	What was the third type of	How old was (HE/SHE)
	cancer?	cancer (NAME) had?	when this cancer was
			diagnosed?
8	F1 <u>35</u>	F136	F137
	1 Yes		enter age
	2☐No (F149) sibling name	write in cancer name and #	00 <1 year old
_	99□DK	(see list above)	99□ DK
9	F149	F150	F151
	1 Yes		enter age
	2 No [nxt sec] sibling name	write in cancer name and #	00 < 1 year old
	99∏DK	(see list above)	99∏ DK
10	F163	F164	F165
	1 ☐ Yes		enter age
	2☐No [nxt sec] sibling name	write in cancer name and #	00 <1 year old
	99□DK	(see list above)	99
11	F177	F178	F179
	1 ☐ Yes		enter age
	2 No [nxt sec] sibling name	write in cancer name and #	$00 \le 1$ year old
	99∏DK	(see list above)	99∏ DK
	7101		
12	F191	F192	F193
	1 Yes		enter age
	2 No [nxt sec] sibling name	write in cancer name and #	00 < 1 year old
	99 □ DK	(see list above)	99□ DK
13	F205	F206	F207
	1 ☐ Yes		enter age
	2 ☐No [nxt sec] sibling name	write in cancer name and #	00 <1 year old
	99 □ DK	(see list above)	99□ DK
14	F219	F220	F221
	1□Yes		enter age
	2☐No [nxt sec] sibling name	write in cancer name and #	00 <1 year old
	99□DK	(see list above)	99 DK

Interviewer: write the total number of siblings here:

I would like to ask you the same questions about your children. Again, include those who are living or deceased, but do not include adopted, foster, or step children.

	How many children do y	F222				
	please include any who may have died.					
	produce and war			al Children		
			■ 00 ☐ None			
			98 🔲 NA			
			99 🔲 DK/R			
	`	to next section)				
	Interviewers please list al				child and	
	complete information acr	, <u></u>		· · · · · · · · · · · · · · · · · · ·	TT 11	
	What is the first name of	What is	Is (name) still living?	How old is	How old was	
	your (oldest/next) Child?	(name's) sex?	nving:	(name) ?	(name) when (he/she) died?	
1	F223 oldest	F224	F225	F226	F227	
	name	1 Male	1□ Yes	enter age	enter age	
	98 🔲 NA (F224)	2 Female	2□ No (F227)		00 <1 year old	
	99	99□ DK	99□ DK (F228)	99 DK (F228)	99□ DK (F228)	
2	F234	F235	F236	F237	F238	
	name	1 Male	1 Yes	enter age	enter age	
	00 No more children	2 Female	2 No (F238)		00 <1 year old	
	99 DK [nxt sec]	99∏ DK	99□ DK (F239)	99 DK (F239)	99□ DK (F229)	
3	F245	F246	F247	F248	F249	
	name	1 Male	1 Yes	enter age	enter age	
	00 No more children	2 Female	2 No (F249)		00 <1 year old	
	99 DK [nxt sec]	99 DK	99 DK (F250)	99 DK (F250)	99 DK (F250)	
4	F256	F257 1	F258 1	F259	F260	
	name 00 No more children	2 Female	1	enter age	enter age 00 <1 year old	
	99 DK [nxt sec]	99 DK	99 DK (F261)	99 DK (F261)	99 DK (F261)	
5	F267	F268	F269	F270	F271	
	name	1 Male	1☐ Yes	enter age	enter age	
	00 🔲 No more children	2 Female	2 No (F271)		00 <1 year old	
	99 DK [nxt sec]	99□ DK	99 DK (F272)	99 DK (F272)	99 DK (F272)	
6	F278	F279	F280	F281	F282	
	name 00 No more children	1 Male	1 Yes	enter age	enter age	
	99 DK [nxt sec]	2 Female 99 DK	2 No (F282) 99 DK (F283)	99 DK (F283)	00 < 1 year old 99 < DK (F238)	
					`	
7	F289	F290	F291	F292	F293	
	name 00 No more children	1 Male 2 Female	1	enter age	enter age	
i	99 DK [nxt sec]	99 DK	99 DK (F294)	99□ DK (F294)	00 < 1 year old 99 < DK (F294)	
	>> Dir [nat 500]			DR (1254)		
				I	<u> </u>	

Cancer Types

1. Skin (not melanoma)
2. Lung
3. Breast
4. Colon
5. Prostate
6. Bladder
7. Project
12. Melanoma
13. Oral cavity
14. Ovary
15. Pancreas
16. Rectum
17. Stomach
18. Herring (normus uteri)

Interviewer: enter total number of children_

10. Leukemia

11. Lymphoma

7. Brain 18. Uterine (corpus uteri)
8. Cervix 19. Other cancer (specify)
9. Kidney 20. Cancer of female repro

20. Cancer of female reproductive organs; site unknown

21. Cancer of the large bowel(colon/rectum); site unknown

22. Relative had cancer; site unknown

	Was (first name) ever	What was the first type of cancer	How old was (HE/SHE)
	diagnosed as having any	(NAME) had?	when this cancer was
<u> </u>	type of cancer?		diagnosed?
1	F228	F229	F230
l	1 Yes	·	enter age
	2☐No child's name	write in cancer name and #	00 <1 year old
1	99□DK	(see list above)	99□ DK (F231)
2	F239	F240	F241
	1 Yes		enter age
	2 No child's name	write in cancer name and #	00 <1 year old
	99∏DK	(see list above)	99 DK (F242)
3	F250	F251	F252
	1 Yes		enter age
	2 No child's name	write in cancer name and #	00 <1 year old
	99 <u>□</u> DK	(see list above)	99 DK (F253)
4	F261	F262	F263
İ	1 Yes		enter age
[2 No child's name	write in cancer name and #	00 <1 year old
	99□DK	(see list above)	99 DK (F264)
5	F272	F273	F274
	1 Yes		enter age
l	2☐No child's name	write in cancer name and #	$00 \square < 1$ year old
	99∐DK	(see list above)	99 DK (F275)
6	F283	F284	F285
	1□Yes		enter age
	2 No child's name	write in cancer name and #	00 <1 year old
	99□DK	(see list above)	99 DK (F286)
7	F294	F295	F296
	1 Yes		enter age
	2☐No child's name	write in cancer name and #	00 <1 year old
	99□DK		99 DK (F297)

		(se	ee list above)				
Interviewer: write the total number of children here:							
Cancer Typ	es						
	Skin (not melanoma)	12.	Melanoma				
	Lung	13.	Oral cavity				
3.]	Breast	14.	Ovary				
4. (Colon	15.	Pancreas				
5.]	Prostate	16.	Rectum				
6 . 1	Bladder	17.	Stomach				
7.]	Brain	18.	Uterine (corpus uteri)				
8. (Cervix	19.	Other cancer (specify)				
9.]	Kidney	20.	Cancer of female reproductive organs; site unknown				
10.	Leukemia	21.	Cancer of the large bowel(colon/rectum); site unknown				
11.	Lymphoma	22.	Relative had cancer; site unknown				

	Did (first name) have a second cancer?	What was the second type of cancer (NAME) had?	How old was (HE/SHE) when this cancer was diagnosed?
1	F231 1 ☐ Yes	F232	F233 enter age
	2□No child's name 99□DK	write in cancer name and # (see list above)	00 <1 year old 99 DK (F242)
2	F242 1 ☐ Yes	F243	F244 enter age
	2□No child's name 99□DK	write in cancer name and # (see list above)	00 <1 year old 99 DK (F253)
3	F253 1	F254	F255 enter age
	2 No child's name 99 DK	write in cancer name and # (see list above)	00 <1 year old 99 DK (F264)
4	F264 1∐Yes	F265	F266 enter age
	2 No child's name 99 DK	write in cancer name and # (see list above)	00 <1 year old 99 DK (F275)
5	F275 1 ☐ Yes	F276	F277 enter age
	2 No child's name 99 DK	write in cancer name and # (see list above)	00 <1 year old 99 DK (F286)
6	F286 1	F287	F288 enter age
	2 No child's name 99 DK	write in cancer name and # (see list above)	00 <1 year old 99 DK (F297)
7	F297 1 Yes	F298	F299 enter age

	2∏No 99∏DK	child's name	write in cancer name and # (see list above)	00 99	<1 year old DK (F300)	
- 1 - 1 - 1 - 1						

Interviewer: enter the total number of children ______.

	What is the first name of	What is	Is (name) still	How old is	How old was
	your (oldest/next) Child?	(names) sex?	living?	(name) ?	(name) when
					(he/she) died?
8	F300	F3 <u>01</u>	F3 <u>02</u>	F303	F304
	name	1 <u>□</u> Male	1 Yes	enter age	enter age
	00 None [nxt sec]	2 Female	2 No (F325)		00 <1 year old
	99 DK	99 DK	99 DK	99 DK	99 DK (F305)
9	F311	F312	F313	F314	F315
	namename	1 Male	1 Yes	enter age	enter age
	00 None [nxt sec]	2 Female	2 No (F339)		00 <1 year old
	99 🔲 DK	99□ DK	99□ DK	99∏ DK	99 DK (F316)
10	F322	F323	F324	F325	F326
	name	1 Male	1 Yes	enter age	enter age
	00 None [nxt sec]	2 Female	2 No (F353)		00 <1 year old
	99 🔲 DK	99∏ DK	99□ DK	99□ DK	99 DK (F327)
					`
11	F333	F334	F335	F336	F337
	name	1 Male	1 Yes	enter age	enter age
	00 None [nxt sec]	2 Female	2☐ No (F367)	0.0	00 <1 year old
1.0	99 DK	99 DK	99 DK	99 DK	99 DK (F338)
12	F344	F345	F346	F347	F348
	name	1 Male	1 Yes	enter age	enter age
	00 ☐ None [nxt sec] 99 ☐ DK	2 Female	2 No (F381)	00 🗀 DV	00
12		99 DK	99□ DK	99 DK	99 DK (F349)
13	F355	F356	F357	F358	F359
	name None [nxt sec]	1 Male 2 Female	1 Yes 2 No (F395)	enter age	enter age 00 < 1 year old
	00 ☐ None [nxt sec] 99 ☐ DK	99 DK	2□ No (F395) 99□ DK	99□ DK	00 <1 year old 99 DK (F360)
14	F366	F3 <u>67</u>	F368	F369	F370
	name	1☐ Male	1□ Yes	enter age	enter age
	00 None [nxt sec]	2 Female	2□ No (F409)		00 <1 year old
	99 🔲 DK	99 DK	99 DK	99 DK	99 DK (F371)

Interviewer: enter the total number of children here:______.

Cancer Types	
1. Skin (not melanoma)	12. Melanoma
2. Lung	13. Oral cavity
3. Breast	14. Ovary
4. Colon	15. Pancreas
5. Prostate	16. Rectum
6. Bladder	17. Stomach
7. Brain	18. Uterine (corpus uteri)
8. Cervix	19. Other cancer (specify)
9. Kidney	Cancer of female reproductive organs; site unknown
10. Leukemia	21. Cancer of the large bowel(colon/rectum); site unknown
11. Lymphoma	22. Relative had cancer; site unknown

	Was (first name) ever	What was the first type of	How old was (HE/SHE)	
	diagnosed as having any type	cancer (NAME) had?	when this cancer was	
	of cancer?	<u> </u>	diagnosed?	
8	F305	F306	F307	
	1 Yes		enter age	
	2 No child's name	write in cancer name and #	00 <1 year old	
	99□DK	(see list above)	99 DK (F308)	
9	F316	F317	F318	
	1 Yes	į	enter age	
	2☐No child's name	write in cancer name and #	00 <1 year old	
	99□DK	(see list above)	99□ DK (F319)	
10	F327	F328	F329	
	1 Yes		enter age	
	2 No child's name	write in cancer name and #	00 <1 year old	
	99_DK	(see list above)	99 DK (F330)	
11	F338	F339	F340	
	1 Yes		enter age	
	2⊡No child's name	write in cancer name and #	00 <1 year old	
	99□DK	(see list above)	99□ DK (F341)	
12	F349	F350	F351	
	1 Yes		enter age	
	2 No child's name	write in cancer name and #	00 <1 year old	
	99∏DK	(see list above)	99 DK (F352)	
13	F360	F361	F362	
	1 Yes		enter age	
	2 No child's name	write in cancer name and #	00 <1 year old	
	99□DK	(see list above)	99 DK (F363)	
14	F371	F372	F373	
	1 Yes		enter age	
	2 No child's name	write in cancer name and #	00 <1 year old	
	99□DK	(see list above)	99 DK (F374)	

Interviewer: enter the total number of children_____.

Cancer Types	
1. Skin (not melanoma)	12. Melanoma
2. Lung	13. Oral cavity
3. Breast	14. Ovary
4. Colon	15. Pancreas
5. Prostate	16. Rectum
6. Bladder	17. Stomach
7. Brain	18. Uterine (corpus uteri)
8. Cervix	19. Other cancer (specify)
9. Kidney	20. Cancer of female reproductive organs; site unknown
10. Leukemia	21. Cancer of the large bowel(colon/rectum) site unknown
11. Lymphoma	22. Relative had cancer; site unknown

-	Did (first name) have a second cancer?	What was the second type of cancer (NAME) had?	How old was (HE/SHE) when this cancer was diagnosed?
8	F308 1	write in cancer name and # (see list above)	F310
9	F319 1	F320 write in cancer name and # (see list above)	F321enter age 00
10	F330 1 Yes 2 No child's name 99 DK	write in cancer name and # (see list above)	enter age 00 < 1 year old 99 < DK (F341)
11	F341 1	write in cancer name and # (see list above)	F343 enter age 00
12	F352 1	write in cancer name and # (see list above)	F354 enter age 00
13	F363 1	write in cancer name and # (see list above)	F365enter age 00
14	F374 1	write in cancer name and #	F376enter age 00

Interviewer: enter the total number of children_

Women's Questionnaire

Let us begin this section of questions by relating them to specific times in your life. To help you become oriented to that period of time in your life think about where you were living, what your job was at the time, if you were married.

1.	What was your weight two years ago? (code directly to nearest pound)	1-500lbs. 99 □DK/R	1
2.	What was your weight ten years ago? (code directly to nearest pound)	1-500lbs.	2
3.	What was your weight twenty years ago?	99 □DK/R 1-500 lbs.	
	(code directly to nearest pound)	99	3
4.	What was your weight at age 16? (code directly to nearest pound)	1-500lbs.	4
	(code directly to nearest pound)	99	
5.	What was your height two years ago?	ftin.	5
6.	Approximately how old were you when you had your first menstrual period?	1-96y.o.	6
		99	
7.	At what age did you have your last period	? 1-96 y.o. 2 □ still has	7
		98	
•	→ If "still has periods", go to Q9		
8.	Why did your periods stop?	1 Menopause	8
		2 Hysterectomy 3 Chemotherapy, X-Ray, I 4 Pills 5 Other 98 NA 99 DK/R	Radiation
	If "Other", specify:		

17. Do you examine your breasts for lum	nps? Yes		17
	NA ☐ 98 DK/R ☐ 99		
18. Does your healthcare provider exami	ine your breasts for l Yes	umps?	
19. Have you ever had a mammogram?	DK/R ☐ 99 Yes ☐ 1		19
→ If "No", go to next section	— No ☐ 2 NA ☐ 98 DK/R ☐ 99		
20. When was the last time you had a mar	nmogram?		
$\frac{}{M} {M} {M} {Y} {Y} {Y} {Y} {Y}$	NA ☐ 98 DK/R ☐ 99		
21. Where was this mammogram done?		·	
Hospital/Clinic name/Radiology group			21 Enter Text
Text City			22 Enter
Text State			23 Enter

This section of the interview concerns your pregnancy history.

24. Have you ever been pregnant?		
	Yes	
	— DK/R ☐ 99	
	. —	
If "No", go to O 26	•	

25. Please answer the following questions about each of your pregnancies including those that did not result in a live birth.

	A	В	С	D	E	F	G	H
did y beco preg	me nant?	What was the outcome? 1=live birth 2=stillbirth 3=miscarriage 4=abortion 5=tubal pregnancy 8=NA 9=DK/R	How many wks did you carry this baby? 98=NA 99=DK/R	What was the baby's sex? 1=male 2=female 98=NA 99=DK/R (stillborn go to H)	Did you breast feed this baby? 1=Yes 2=No 98=NA 99=DK/R (if No go to H)	For how many months? 98=NA 99=DK/R	Why did you stop nursing? 1=normal weaning 2=cracked nipples 3=painful 4=little milk 5=other med 6=other nonmedical 98=NA 99=DK/R	Did you take a shot or pill to dry up your milk? 1=Yes shot 2=No 3=Yes pills 4=Yes, DK shot or pill 98=NA 99=DK/R
	AGE	OUTCOME	WEEKS	SEX	NURSED	Months	STOPPED	DRIED UP?
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

"Now I have some questions about the use of hormone medications. The first questions are about hormone replacement therapy, hormones that are taken around the time of menopause. This does not include hormones used for birth control."

Hormone Replacement Therapy (HRT)

Interviewer: show card F	
26. Did you ever take any type of estrogen,	such as Premarin, progesterone,
such a Provera, testosterone, and other	hormone medication (Show Card):
1) menopause-related symptoms (h	ot flashes, sweating, vaginal dryness, bladder
problems)	
2) depression, anxiety, emotional d	istress
	ectomy or ophorectomy (ovaries removed)
4) osteoporosis (bone loss), to prev	ent osteoporosis or bone loss (or thinning)
5) cardiovascular disease, to prever	nt cardiovascular disease
6) irregular menstrual periods, to re	
7) treatment of disease (specify)
8) prevention of disease (specify	
9) anti-estrogen effect in a woman	using menopausal estrogens
10) other (specify)
These hormones could include pills, va	ginal creams or suppositories, injections, or skin
patches.	
Yes 🔲 1	
No 2	If "No", go to Q33
DK/R 🗌 99	
27. Were these hormones (estrogen, proges	terone, or testosterone)
in the form of a:	x □ 1 x □ 0
A. Pill	Yes
B. Vaginal Cream or Suppository	Yes ☐ 1 No ☐ 2 DK/R ☐ 99
C. Skin Patch	Yes ☐ 1 No ☐ 2 DK/R ☐ 99
D. Shot	Yes
20 When you were taking these (harmone	a) did way taka tham for 3 straight avales or mare?
28. When you were taking these (normone	s), did you take them for <u>3 straight cycles</u> or more?
A. Pill	Yes \square 1 No \square 2 (yes \rightarrow Complete 29.1-29.12)
	Yes \square 1 No \square 2 (yes \rightarrow Complete 30.1-30.12)
C. Skin Patch	Yes \square 1 No \square 2 (yes \rightarrow Complete 31.1-31.12)
D. Shot	Yes \square 1 No \square 2 (yes \rightarrow Complete 32.1-32.12)
2. 5460	10 L 10 L 2 (00) complete suit suit suit s
If "No", go to Q 33	

"Now I would like to ask you some details about your use of these hormones. First, see if you can recognize the specific type(s) you used from this chart." [show examples]

29. If Estrogen, Progesterone, or Testosterone Pills Reported

Complete 29.1-29.12 for each episode of use.

29	9.1-29.2	29.3	29.4-29.5	29.6	29.7
(first/nest/nest/nest/nest/nest/nest/nest/ne	the name of the xt) pill you took? mplete name and robe for frequency of measure. kamples]	Please tell me the reason you used this pill? [show card]	At what age did you (first/next) start taking this pill? At what age did you stop taking this pill? If still taking, record	How many total years and months between (ages in 29.4 and 29.5) did you take this pill?	When you were taking this hormone between (ages in 29.4 and 29.5) did you usually take it every day, or in cycles?
1 st Pill	Name: Code:per 1day #pills 2week	(specify reason) code:	Age start	#of Years and Months #of	Every day4 Every other day5 In Cycles (specify)7 Other (specify)8
2 nd Pill	Name: Code: per 1day #pills 2week	(specify reason)	Age start	#of Years and Months	Every day4 Every other day5 In Cycles (specify)7 ————— Other (specify)8
3 rd Pill	Name: Code:per 1day #pills 2week	(specify reason) code:	Age start	YearsYears andMonths#of	Every day
4 th Pill	Name: Code:per 1day #pills 2week	(specify reason) code:	Age start	Years #of andMonths #of	Every day4 Every other day5 In Cycles (specify)7 ——— Other (specify)8

If hormone was estrogen, go to Q29.8. If not, go to 30.

29.8While you were taking estrogen pills, did you also take progesterone? Yes 1 No 2 Go to next hormone 29.9-29.10 29.11-29.12 What is the name of the During the (first/next) time when you were taking (estrogen) and (progesterone) in the same month, on which days did you usually take the estrogen and on which days did you progesterone that you usually take the progesterone? took with this estrogen? Enter complete name and Circle first and last dates of each. Then connect first to last with a line. Enter the Start code. Probe for Day and End Day for Estrogen (E) and Progesterone (P) and record total number days on frequency and unit of Estrogen (E), Progesterone (P), and Estrogen plus Progesterone (E+P). measure. [show examples] 1234567 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 EEEEEEE EEE E E EEEEE E E E E E E E E E E E E E E PPPPPPPPPPPP P PPPPP P PPPP P PPPPP When you were taking this progesterone Start Day Stop Day **Total Days** between (ages in 29.4 and 29.5), how often did you take it? \overline{E} \overline{P} \overline{E} \overline{P} per 1...Day #Pills 2...Week $\begin{array}{ll} 9... Every \ month & 11... Every \ 3^{rd} \ month \\ 10... Every \ other \ month & 12... Every \ 4^{th} \ month \end{array}$

E+P

EEEEE

PPPPP

Total Days

E P

E+P

EEEEE PPPP

Total Days

E P

E+P

EEEEE

PPPPP

Total Days

 \overline{E} \overline{P}

E+P

EEEEE

PPPPP

Total Days

E P

E+P

8...Other (Specify)

you take it?

you take it?

you take it?

you take it?

9...Every month

8...Other (Specify)

9...Every month

8...Other (Specify)

9...Every month

8...Other (Specify)

9...Every month

8...Other (Specify)

EEEEEEEEEEEE

PPPPPP PPPPPP

between (ages in 29.4 and 29.5), how often did

10...Every other month 12...Every 4th month

between (ages in 29.4 and 29.5), how often did

10...Every other month 12...Every 4th month

E E E E E E E E E E E E E

PPPPPPPPPPP

between (ages in 29.4 and 29.5), how often did

10...Every other month 12...Every 4th month

EEEEEEEEEEE

PPPPP PPPPPPP

between (ages in 29.4 and 29.5), how often did

10...Every other month 12...Every 4th month

When you were taking this progesterone

When you were taking this progesterone

When you were taking this progesterone

11...Every 3rd month

11...Every 3rd month

11...Every 3rd month

11...Every 3rd month

When you were taking this progesterone

Name:_

Code:

Name:____

Code:_____

#Pills 2...Week

per 1...Day

Name:_____

_per 1...Day #Pills 2...Week

Name:

_per 1...Day #Pills 2...Week

Name:____

Code:

#Pills 2...Week

per 1...Day

Code:

Code:

EEEEEEE

P PPPPP P

Start Day

Р

Е

E

р

E

EEE E E

PPPPP

Stop Day

EEE E E

PPPP P

Stop Day

EEE E E

PPPPP

Stop Day

EEE E E

PPPPP

Stop Day

E

P

E

30. If Vaginal Cream or Suppository Reported:

Complete 30.1-30.12

30	0.1-30.2	30.3	30.4-30.5	30.6	30.6a	30.7
(first/nex or suppo Enter co code. Pr and unit	the name of the kt) vaginal cream ository you used? Implete name and robe for frequency of measure.	Please tell me the reason you used this vaginal cream or suppository?	At what age did you (first/next) start taking this vaginal cream or suppository? At what age did you stop? If still using, record current age.	How many total years and months between (ages in 30.4 & 30.5) did you use this cream or suppository?	If using cream, how many applicatorfulls did you use each time	When you were taking this hormone between (ages in 30.4 and 30.5) did you usually take it every week, or in cycles?
1 st Crm/ Supp	Name: Code:per 1day #times 2week 3month 4year	(specify reason)	Age start	#of Years and Months	.251 .502 1.03 1.54 2 or more5 Unknown9	Every week6 In Cycles(specify)7 Other (specify)8
2 nd Crm/ Supp	Name: Code: per 1day #times 2week 3month 4year	(specify reason) code:	Age startAge stop	Years #of and Months	.251 .502 1.03 1.54 2 or more5 Unknown9	Every week6 In Cycles(specify)7 Other (specify)8
3 rd Crm/ Supp	Name: Code:per 1day #times 2week 3month 4year	(specify reason) code:	Age startAge stop	#of Years and Months	.251 .502 1.03 1.54 2 or more5 Unknown9	Every week6 In Cycles(specify)7 Other (specify)8
4 th Crm/ Supp	Name: Code:per 1day #times 2week 3month 4year	(specify reason)	Age startAge stop	Years #of andMonths	.251 .502 1.03 1.54 2 or more5 Unknown9	Every week6 In Cycles(specify)7 ——— Other (specify)8
5 th Crm/ Supp	Name: Code: per 1day #times 2week 3month 4year	(specify reason) code:	Age startAge stop	Years #of andMonths	.251 .502 1.03 1.54 2 or more5 Unknown9	Every week6 In Cycles(specify)7 ——— Other (specify)8

If hormone was estrogen, go to Q30. If not, go to 33.

30. 8 While you were using estrogen (cream/suppository), did you also take progesterone?				
	Yes 🔲 1	No 🔲 2		So to next hormone
30.9-30.10		↓	30.11-30.12	
What is the name of the	During the	(first/next) time	when you were to	aking (estrogen) and (progesterone) in the
progesterone that you	same month, o	on which days di	d you usually take	e the estrogen and on which days did you
took with this estrogen?		e progesterone?		
Enter complete name and code. Probe for				nect first to last with a line. Enter the Start erone (P) and record total number days on
frequency and unit of				us Progesterone (E+P).
measure.	2011 0 8 5 11 (2), 5	rogenerație (r)	,, 2511 0 5 011 F	
[show examples]	1234567		13 14 15 16 17	
l	EEEEEEE P PPPPP P	EEEE E PPPPP	EEEEE	E E E E E E E E E E E E E E E E E E E
Name:	PPPPPP			
Code:	Start Day	Stop Day	Total Days	When you were taking this progesterone between (ages in 30.4 and 30.5), how often did
per 1Day	E P	E P	E P	you take it?
#Pills 2Week			E+P	9Every month 11Every 3 rd month 10Every other month 12Every 4 th month 8Other (Specify)
Name:	EEEEEEE P PPPPP P	EEEE E PPPPP	EEEEE	E E E E E E E E E E E E E E E E E E E
Code:	Start Day	Stop Day	Total Days	When you were taking this progesterone between (ages in 30.4 and 30.5), how often did
per 1Day	E P	E P	E P	you take it?
#Pills 2Week			E+P	9Every month 11Every 3 rd month 10Every other month 12Every 4 th month 8Other (Specify)
Name:	EEEEEEE P PPPPP P	EEEE E PPPPP	EEEEE	E E E E E E E E E E E E E E E E E E E
Code:	Start Day	Stop Day	Total Days	When you were taking this progesterone between (ages in 30.4 and 30.5), how often did
per 1Day	E P	E P	E P	you take it?
#Pills 2Week			E+P	9Every month 11Every 3 rd month 10Every other month 12Every 4 th month 8Other (Specify)
Name:	EEEEEEE P PPPPP P	EEEE E PPPPP	E E E E E P P P P P	E E E E E E E E E E E E E E E E E E E
Code:	Start Day	Stop Day	Total Days	When you were taking this progesterone between (ages in 30.4 and 30.5), how often did
per 1Day	E P	E P	E P	you take it?
#Pills 2Week			E+P	9Every month 11Every 3 rd month 10Every other month 12Every 4 th month 8Other (Specify)
Name:	EEEEEEE PPPPPPP	EEE E E PPPPP	E E E E E P P P P P	E E E E E E E E E E E E E E E E E E E
Code:	Start Day	Stop Day	Total Days	When you were taking this progesterone between (ages in 30.4 and 30.5), how often did
per 1Day	E P	E P	E P	you take it?
#Pills 2Week			E+P	9Every month 11Every 3 rd month 10Every other month 12Every 4 th month

31. If Hormone Skin Patches Reported:

Complete 31.1-31.12 for each episode of use.

3	1.1-31.2	31.3	31.4-31.5	31.6	31.7
(first/nex patch you Enter con code. Pr	mplete name and obe for frequency of measure.	Please tell me the reason you used this skin patch?	At what age did you (first/next) start using these patches? At what age did you stop? If still taking, record current age.	How many total years and months between (ages in 31.4 and 31.5) did you take these skin patches?	When you were using these skin patches between (ages in 31.4 and 31.5) did you usually take it every week or in cycles?
1 st Patch Used	Name: Code: per 1day #times 2week 3month 4year	(specify reason)	Age start	Years #of andMonths #of	Every week6 In Cycles (specify)7 Other (specify)8
2 nd Patch Used	Name: Code: per 1day #times 2week 3month 4year	(specify reason)	Age start	#of and Months	Every week6 In Cycles (specify)7 Other (specify)8
3 rd Patch Used	Name: Code: per 1day #times 2week 3month 4year	(specify reason)	Age start	Years #of andMonths #of	Every week6 In Cycles (specify)7 ———— Other (specify)8
4 th Patch Used	Name: Code: per 1day #times 2week 3month 4year	(specify reason)	Age start	Years #of andMonths #of	Every week6 In Cycles (specify)7 Other (specify)8
5 th Patch Used	Code:per 1day #times 2week 3month 4year	(specify reason) code:	Age start	Years #of andMonths #of	Every week6 In Cycles (specify)7 Other (specify)8

If hormone was estrogen, go to Q31.8. If not, go to 32.

31.8 While you were using estrogen skin patches, did you also take progesterone?

Yes 🔲 1	No 🗌 2	 60	to next hormone
+	31.11	-31.12	

31.9-31.10	31.11-31.12			
What is the name of the	During the	(first/next) time	when you were ta	aking (estrogen) and (progesterone) in the
progesterone that you	same month, on which days did you usually take the estrogen and on which days did you			
took with this estrogen?	usually take the progesterone?			
Enter complete name and			each. Then conn	nect first to last with a line. Enter the Start
code. Probe for				erone (P) and record total number days on
frequency and unit of	Estrogen (E), I	Propesterone (P)	and Estrogen pli	us Progesterone (E+P).
measure.	Lonogen (2), -	108000010111 (-),	, w	20110gc3:3:3:0 (= 1).
[show examples]	1234567	8 9 10 11 12	13 14 15 16 17	18 19 20 21 22 23 24 25 26 27 28 29 30 31
[SHOW CAUTIFICS]	EEEEEEE	EEEEEE	EEEEE	E E E E E E E E E E E E E E
Nama	PPPPPPP	PPPPP	PPPPP	PPPPPPPPPPPPPP
Name:	* * * * * * *	• • • • •		
Cado:	Start Day	Stop Day	Total Days	When you were taking this
Code:				1 •
1 Day	\overline{E} \overline{P}	<u>E</u> P	E P	progesterone between (ages in
per 1Day	EF		E F	31.4 and 31.5), how often did
#Pills 2Week	!	!	<u> </u>	you take it?
	!	1	E+P	you take it:
	ļ	'		9Every month 11Every 3 rd month
		'		10Every other month 12Every 4 th month
	!	!		8Other (Specify)
	EEEEEEE	EEEEE	EEEEE	EEEEEEEEEEEE
Name:	PPPPPPP	PPPPP	PPPPP	PPPPPP PPPPPPPP
11000	!	1		<u>.</u>
Code:	Start Day	Stop Day	Total Days	When you were taking this progesterone
		!		between (ages in 31.4 and 31.5), how often did
per 1Day	E P	E P	E P	you take it?
#Pills 2Week				9Every month 11Every 3 rd month
// III	!	1	E+P	10Every other month 12Every 4 th month
		1	10.17	8Other (Specify)
	EEEEEEE	EEEEE	EEEEE	EEEEEEEEEEE
Name:	PPPPPPP	PPPPP	PPPPP	PPPPPP PPPPPPPP
	1	1	ł	,
Code:	Start Day	Stop Day	Total Days	When you were taking this progesterone
0000	!	!		between (ages in 31.4 and 31.5), how often did
per 1Day	E P	E P	E P	you take it?
#Pills 2Week			_	9Every month 11Every 3 rd month
// A A A A A A A A A A A A A A A A A A	!	1	E+P	10Every other month 12Every 4 th month
		1	E I	8Other (Specify)
,	EEEEEEE	EEEEE	EEEEE	EEEEEEEEEEEE
Name:	PPPPPPP	PPPPP	PPPPP	PPPPPPPPPPPPP
Code:	Start Day	Stop Day	Total Days	When you were taking this progesterone
0001	l !	l '		between (ages in 31.4 and 31.5), how often did
per 1Day	E P	E P	E P	you take it?
#Pills 2Week		1	l	9Every month 11Every 3 rd month
// Allo =		1	E+P	10Every other month 12Every 4 th month
	[1	D'1	8Other (Specify)
	EEEEEEE	EEE E E	EEEEE	EEEEEEEEEEEE
Name:	PPPPPPP	PPPPP	PPPPP	
		'		
Code:	Start Day	Stop Day	Total Days	When you were taking this progesterone
	l !	l !	l <u> </u>	between (ages in 31.4 and 31.5), how often did you take it?
per 1Day	E P	E P	E P	you take it?
#Pills 2Week	_	(!	ĺ	9Every month 11Every 3 rd month
	ļ	į	E+P	10Every other month 12Every 4 th month
		1	1 2.1	8Other (Specify)

32. If Estrogen, Progesterone, or Testosterone Shots Reported:

Complete 31.1-31.12

	32.1-32.2	32.3	32.4-32.5	32.6	32.7
(first/nex you rece Enter co code. Pr	mplete name and robe for frequency of measure.	Please tell me the reason you received this shot?	At what age did you (first/next) start receiving this hormone shot? At what age did you stop? If still taking, record current age.	How many total years and months between (ages in 32.4 and 32.5) did you receive these hormone shots?	When you were receiving these hormone shots between (ages in 32.4 and 32.5) did you receive them every month or in cycles?
1 st Shot	Name: Code: per Week2 #Times Month3 Year4	(specify reason)	Age start	YearsYearsMonthsMonths	Every week6 Every month7 In Cycles (specify)9 Other (specify)8
2 nd Shot	Name: Code:per Week2 #Times Month3 Year4	(specify reason)	Age start	YearsYears andMonths	Every week6 Every month7 In Cycles (specify)9 Other (specify)8
3 rd Shot	Name: Code: per Week2 #Times Month3 Year4	(specify reason) code:	Age start	YearsMonthsMonths	Every week6 Every month7 In Cycles (specify)9 Other (specify)8
4 th Shot	Name: Code:per Week2 #Times Month3 Year4	(specify reason) code:	Age start	YearsMonthsMonths	Every week6 Every month7 In Cycles (specify)9 Other (specify)8
5 th Shot	Name: Code:per Week2 #Times Month3 Year4	(specify reason)	Age start	Years #of andMonths #of	Every week6 Every month7 In Cycles (specify)9 Other (specify)8

If hormone was estrogen, go to Q32.8. If not, go to next hormone, Q33.

32.8 While you were taking estrogen shots, did you also take progesterone?

	Yes 🔲 1	No 🗌 2		to next hormone
	1			
32.9-32.10	<u> </u>			1-32.12
What is the name of the				aking (estrogen) and (progesterone) in the
progesterone that you			i you usually take	e the estrogen and on which days did you
took with this estrogen		e progesterone?	· -t Than sonn	C to last with a line. Tutou the Ctant
shot? Enter complete name and code. Probe				nect first to last with a line. Enter the Start erone (P) and record total number days on
for frequency and unit of				us Progesterone (E+P).
measure.	Lanogen (L), 1	Togesterone (1)	, and Landern pro	us i rogesterone (E-1).
[show examples]	1234567	8 9 10 11 12	13 14 15 16 17	
	EEEEEEE	EEEE E	EEEEE	E E E E E E E E E E E E E
Name:	PPPPPP	PPPPP	PPPPP	
Cada.	Start Day	Stop Day	Total Days	When you were taking this progesterone
Code:	2	5.0p 2.1j	10 2 = 1,2	between (ages in 32.4 and 32.5), how often did
per 1Day	E P	E P	E P	you take it?
#Pills 2Week	ĺ			9Every month 11Every 3 rd month
			E+P	10Every other month 12Every 4 th month
				8Other (Specify)
Mamai	EEEEEEE P PPPPP P	EEE E E	E E E E E P P P P P	
Name:				
Code:	Start Day	Stop Day	Total Days	When you were taking this progesterone
	l — — I			between (ages in 32.4 and 32.5), how often did you take it?
per 1Day	E P	E P	E P	you take it:
#Pills 2Week				9Every month 11Every 3 rd month
			E+P	10Every other month 12Every 4 th month
	EEEEEEE	EEEE E	EEEEE	8Other (Specify) E E E E E E E E E E E E E E E E
Name:	PPPPPP	PPPPP	PPPPP	PPPPPPPPPPPP
Code:	Start Day	Stop Day	Total Days	When you were taking this progesterone between (ages in 32.4 and 32.5), how often did
1 D	<u> </u>			you take it?
per 1Day #Pills 2Week	E P	E P	E P	
#PHIS Z WOOR			E+P	9Every month 11Every 3 rd month 10Every other month 12Every 4 th month
			Ŀ⊤r	8Other (Specify)
	EEEEEEE	EEEEE	EEEEE	E E E E E E E E E E E E
Name:	PPPPPPP	PPPPP	PPPPP	PPPPPP PPPPPPP
Code:	Start Day	Stop Day	Total Days	When you were taking this progesterone
Couc				between (ages in 32.4 and 32.5), how often did
per 1Day	E P	E P	E P	you take it?
#Pills 2Week				9Every month 11Every 3 rd month
		. !	E+P	10Every other month 12Every 4 th month
	EEEEEEE	EEE E E	EEEEE	8Other (Specify) E E E E E E E E E E E E E E E E E E E
Name:	PPPPPPP	PPPPP	PPPPP	PPPPPPPPPPPPP
Code:	Start Day	Stop Day	Total Days	When you were taking this progesterone between (ages in 32.4 and 32.5), how often did
				you take it?
per 1Day #Pills 2Week	E P	E P	E P	
#Pills 2Week	ı		Trib	9Every month 11Every 3 rd month 10Every other month 12Every 4 th month
			E+P	8Other (Specify)

3. Did you ever take birth control pills (oral contraceptives)	33.0
or any reason? VES 1 NO 2 (Go to Q34) DK/R 99	
33.1 At what age did you start taking birth control pills?y.o. 98 \[\sum NA 99 \[\sum DK/R \]	33.1
33.2 At what age did you stop taking birth control pills?y.o. 98 \[\sum NA 99 \[\sum DK/R \]	33.2
33.3 How many total years and months between (ages in 33.1 and 33.2) did you take birth control pills?yrs &months	(enter in months)
33.4 Did you use birth control pills before your first full-term pregnancy? Yes 1	33.4
No 2 Never pregnant 3 (Go to Q34)	
33.5 How many total years and months did you use birth control pills before your first full-term pregnancy?yrs &months	(enter in months)
34. Did you ever take DES (diethylstilbestrol) Yes	34
34.1 At what age did you start taking DES? 1-96yrs. NA 98 DK/R 99	34.1
34.2 At what age did you stop taking DES? 1-96 y.o. NA 98 DK/ R 99	34.2
34.3 How many total years and months between (ages in 34.1 and 34.2) did you take DES?	34.3
yrs &months	(enter in months)

~

35. Did you ever take shots called depo-provera (DMPA) for birth control or for any other reason?	
Yes	35
35.1- 35.2 When you were taking depo-provera shots, how often did you get a shot? every month	35.1 (times) 35.2
35.3 At what age did you start taking depo-provera shots? 1-96y.o. NA 98 DK/R 99	35.3
35.4 At what age did you stop taking depo-provera shots? 1-96y.o. NA 98 DK/R 99	35.4
35.5 How many total years and months between (ages in 35.3 and 35.4) did you take depo-provera shots?yrs &months	35.5
36. Have you taken any other female hormone medications that we have not discussed? Yes ☐ 1 No ☐ 2 (Go to next section)	<u></u>
36.1 What was the name of the hormone? 36.2 What was the reason you took the hormone?	
. 36.3 Was this hormone in the form of a: A. Pill B. Vaginal Cream or Suppository C. Skin Patch D. Shot E. Not applicable	36.3

That completes this interview on the use of female hormone medications. Thank you very much for your cooperation. BODY MEASUREMENTS

1.	WEIGHTlbs.		BM1
2.	HEIGHTftin=		BM2
3.	WAIST (measured at narrowest point)	in	ВМЗ
4.	HIP (measured at widest point)	in	BM4

LIFESTYLE

These final questions are for statistical purposes only.			
What was the total number of persons		H032	
in your household last year, including yo	ourself?		
	1-25 enter num 98 NA 99 DK/R	ber of persons	
If we need to contact you in the future, it is helpful to know the name of an		HTX5	
individual outside your household who will always know your whereabouts. Are you willing to provide us the name, number of a close friend or relative who does not live with you?	address, and phone		
THIS SECTION ENTER FULL TEXT	1 Yes 98 NA 99 DK/R		
Name: Interviewer: enter first name first			
Street:			
Apt. #			
City			
State		1	
Zipcode			
Telephone: ()			

What is [NAME'S] relationship to you?	•	H037
	1 mother 2 father 3 son 4 daughter 5 brother 6 sister 7 step daughter 98 NA 99 DK/R	8 step son 9 daughter-in- law 10 son-in-law 11 friend 0 other (specify)
Do you currently have a valid driver's l	icense or I.D. card?	H038
	1 Yes 2 No 98 NA 99 DK/R	
Are you enrolled in Medicare?	4 🗆	
	1 □ Yes 2 □ No	HO39
	98 □ NA	
	99 □ DK/R	
This question asks about your househol income last year. Please mark the appr box for the income category that best	opriate	НО40
describes your total family income last y		an 5,000
,		en 5,000 and 10,000 en 10,000 and 20,000
	4 betwee	en 20,000 and 30,000
		en 30,000 and 40,000 en 40,000 and 50,000
		en 50,000 and 60,000

•	8 more than 60,000 98 NA 99 DK/R
To help identify participants in our study, we are asking for your social security number. Your providing this information to us is voluntary Your answer or refusal to answer will have no effein any way on your social security benefits. What is your social security number?	ect
Social Security Number	
That completes the interview. You have been very helpful and	THNX
I appreciate your time and cooperation. TIME INTERVIEW COMPLETE::	am/pm
minutes (length of interview)	

Complete this section after you have thanked and left the subject

INTERVIEW QUALITY

Where was the interview conducted?	1002
Respondent's Home Hospital or MD Office Nursing Home Somewhere else, specify	
Excluding yourself and the respondent, how many other people were present during the	I003
interview?	
0-10 Enter number	
If I003 equals 0, go to I012.	
Were third parties present in all or part of the	I004
interview?	
1 all (go to I005) 3 part 98 NA	
Which section: demographics	1005
1	
Section: smoking	1006
1 Spouse	

	3	Other (s) Spouse and other (s) No one present NA	
Section: occupational history			1007
	1	Spouse Other (s) Spouse and other (s) No one present NA	
Section: diet history			I008
	1	Spouse Other (s) Spouse and other (s) No one present NA	
Section: medical history			1009
	1	Spouse Other (s) Spouse and other (s) No one present NA	
Section: family history	3	1 Spouse Other (s) Spouse and other (s) No one present NA	I010
Section: reproductive history			I010A
	1	Spouse Other (s) Spouse and other (s) No one present	

	98 🔲 NA	
Section: lifestyle		
	1 Spouse	I011
	3 □ Other (s)	
	5 \square Spouse and other (s)	
	7 \square No one present	
	98 □ NA	
QUALITY OF INFORMAT	TION IN SECTION: demographics	I012
	1 High quality 3 Generally reliable 5 Questionable 7 Unsatisfactory 98 NA	
QUALITY OF INFORMA	TION IN SECTION: smoking	I013
	1 High quality 3 Generally reliable 5 Questionable 7 Unsatisfactory 98 NA	
QUALITY OF INFORMAT	TION IN SECTION: occupational history	I014
	1 High quality 3 Generally reliable 5 Questionable 7 Unsatisfactory 98 NA	

QUALITY OF INFORMATION IN SECTION: diet h	istory I015
1 High qualit 3 Generally r 5 Questionab 7 Unsatisfactors 98 NA	eliable le
QUALITY OF INFORMATION IN SECTION: medic	cal history IO16
1 High quality 3 Generally responses 5 Questionab 7 Unsatisfacto 98 NA	eliable le
QUALITY OF INFORMATION IN SECTION: family	history I017
1 High quality 3 Generally re 5 Questionably 7 Unsatisfactor 98 NA	eliable le
QUALITY OF INFORMATION IN SECTION: repro	ductive history I018
1 High Qualit 3 Generally re 5 Questionable 7 Unsatisfacto 98 NA QUALITY OF INFORMATION IN SECTION: lifesty	eliable le ory
1 ∐ High Quality	2015
3 ☐ Generally re	
5 Questionable	
7 Unsatisfactor	ry

The overall quality of this interview is:				
*	High Quality Generally reliable Questionable[go to I024] Unsatisfactory [go to I024]	I021		
Interviewer: * go to I023.				
The main reason for the unsatisfac	tory or	I022		
questionable quality of information	n is because:			
1 2 3 4 5 7 8 9 10 6	Did not understand or speak er Was bored or uninterested Was upset or depressed Had poor hearing or speech Was confused by frequent inte Was emotionally unstable (dru Was physically ill	fic nglish well erruptions		
Was the respondent's overall coop	eration:	I023		
1 3 5 7	☐ Very good ☐ Good ☐ Fair ☐ Poor			

END QUALITY SECTION